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Gambling in older adults: Factors associated with problem gambling behaviour in older adults.

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GAMBLING IN OLDER ADULTS: FACTORS ASSOCIATED WITH PROBLEM GAMBLING BEHAVIOUR IN OLDER ADULTS.

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Abstract

Increase in the accessibility and social acceptance of gambling activities and venues has resulted in a significant rise in the number of individuals gambling. Older adults in particular appear to be gambling at a much higher rate, although relatively little research has examined this population with respect to gambling. The purpose of this study was to examine the etiological, social, emotional, and situational variables related to the onset and maintenance of problem gambling in older adults. Specifically, the relationship between depression, stress, coping styles, health, dissociation, and childhood trauma, and gambling severity were investigated from the frameworks of Jacobs' General Theory of Addictions. This study also examined whether or not early dissociative states as a result of childhood trauma predict a relationship between later dissociation during gambling and whether or not dissociation was related to degree of problem gambling. Ninety-one older adults (age 55+) were recruited from a treatment group and from the general population and completed several measures. A subset of the sample also participated in semi-structured interviews allowing for a qualitative analyses. Results indicated that 30.8% of the sample scored in the Moderate/High Risk to Problem Gambling range. This group, compared with No-to-Low Risk gamblers, demonstrated significantly higher scores on measures of depressive symptomatology, perceived stress, health difficulties, negative coping strategies and dissociation. Regression analyses indicated that the combination of dissociation during gambling, emotion-focused coping, depressive

symptomatology and the interactive effects of childhood trauma significantly predicted gambling severity scores. Qualitative investigation suggested that negative life-events, depression, and the desire to escape were involved in both the onset and maintenance of problem gambling behaviour. Findings are interpreted and discussed with respect to theories in the literature and implications for identification, prevention, and intervention with older problem gamblers.

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Introduction and Literature Review

Background

Over the past two decades, legalized gambling and the number of gambling venues in the United States and Canada have increased at a phenomenal rate. In Canada, the provinces operate an extensive array of lotteries, ranging from instant win tickets to sports wagering. The gross sales of lottery tickets in Canada was estimated to have been in the area of $5.2 billion in 1994/1995. Provincial governments also permit a number of modes of charitable gambling, including bingo, raffles, and travelling casinos. These were estimated to have generated close to $5 billion in sales in 1994/1995. Gambling on horse racing grossed an estimated $1.9 billion in Canada during the same period (National Council of Welfare, 1996). Several permanent casinos have been established in Canada, including four in Ontario. Video lottery terminals (VLTs) are also available in most provinces of Canada. The overall casino and VLT wagering was estimated at approximately $8 billion dollars per year in 1994/1995. Overall, the 1995 national gambling revenue totalled $4.6 billion (National Council of Welfare, 1996). A more recent report indicates that gambling in Canada is rising at an even faster rate. The Canadian Gambling News (2001) reported that total net gambling *profits* for all gaming sectors and for all provinces in 1999-2000 was $5.7 billion, which was a 7.5% increase since 1998-1999).

Ontario leads all provinces in the amount of money wagered annually. In

1999-2000, total net gaming profits for Ontario amounted to $2.0 billion, of which $919.9 million came from Casinos. Ontario Lotteries during the same time span had a net total income of $731.9 million (Canadian Gaming News, 2001). An additional $344.1 million was wagered on charitable gaming, and approximately two-thirds of the country's $48 million wagered on horse racing occurred in Ontario (Canadian Gaming News, 2001).

The increase in accessibility of gambling venues and options has resulted in an increase in both the availability and acceptance of gambling as a social activity (Breen & Zuckerman, 1996). The result has been an observed increase in the levels of problems related to gambling behavior. The Diagnostic and Statistical Manual of Mental Disorders, 4th Ed. (DSM-IV) (American Psychiatric Association, 1994) estimates that between 1 and 3% of the adult population would be classified as pathological gamblers. Numerous studies have examined prevalence rates for problem and pathological gamblers across North America. Studies examining the prevalence of problem gambling that would result in a diagnosis of pathological gambling, indicated an average estimate of 0.84% from 1977 to 1993 (Govoni, 2000). Similar prevalence studies from 1994-1997 showed the average prevalence rate had increased to 1.29% (Shaffer, Hall, & Vanderbilt, 1997). Prevalence estimates vary greatly from study to study, and across various subsets of the population. Volberg & Steadman (1989) found 1.4%, 1.5%, and 1.4% of the population classified as probable pathological gamblers in New Jersey, Maryland, and New York respectively. Ladouceur, Dube, & Bujold (1994)

demonstrated a pathological gambling prevalence rate of 5.7% for the college students they studied. In contrast, Govoni, Rupcich, & Frisch (1997) found that 17.5 % of the adolescent individuals studied were problem or at risk gamblers. Langewisch & Frisch (1998) found similar elevated rates with an undergraduate, predominantly male population. It should be noted that the samples for the last three studies were predominantly, if not entirely, male. The DSM-IV estimates that two out of every three pathological gamblers are male. Research has supported this claim, particularly for adolescents (Jacobs, 2000) and young adults (Lesieur, Cross, Frank, et. al, 1991).

More recent research is suggesting that overall rates of problem gambling are on the rise. Wiebe, Single, & Falkowski (2001) conducted a large survey of 340,000 adults in Ontario. Of the total sample, they found that 9.6% classified as "at-risk" gamblers in that they indicated relatively minor problems associated with their gambling (as measured by the Canadian Problem Gambling Index - CPGI) (Ferris & Wiebe, 2001). In addition, 3.8% of the sample reported problems of sufficient magnitude to classify as moderate or severe problem gamblers. Pathological gambling was first classified as a psychiatric disorder in the Diagnostic and Statistical Manual of Mental Disorders, III (DSM-III) (American Psychiatric Association, 1980). The corresponding recognition of gambling as a significant societal problem led to a substantial increase in interest, both clinically and from a research perspective. While early investigation tended to be too narrowly focussed (Blume, 1987), more recent research has seen the development

and refinement of addiction models, in which gambling is incorporated (Jacobs, 1982, 1993; Shaffer, 1996). Given the lack of a psychoactive substance in gambling, this research has added significantly to the area of addictions research where the focus had often been on the direct physiological aspects of the substance in question (drugs or alcohol) (Brown, 1993). Despite these contributions, there is still considerable disagreement in the clinical and academic fields as to what constitutes an addiction and whether or not pathological gambling should be considered an addiction.

Jacobs' General Theory of Addictions (1986)

Jacobs' General Theory of Addictions provides a framework for understanding the psychological, social, and biological bases for the development and maintenance of addictions. It is based on a diathesis, or vulnerability-stress model in which predisposed personality variables interact with biological and other situation-specific factors to influence the development of a particular addiction (Ciarrocchi, Kirschner, & Fallick (1991). Jacobs (1989) defines an addiction as "a dependent state acquired over time by a predisposed person in an attempt to relieve a chronic stress condition" (p. 35). Accordingly, only certain individuals can develop an addiction, and whichever addiction is chosen serves to provide relief from a state of chronic stress. Jacobs biopsychosocial model proposes that there are several basic premises that may predispose someone to becoming an addict. Jacobs suggests that two sets of interdependent, predisposing factors must be present for an individual to be at risk of developing and maintaining an addictive

behavior.

The first factor is an individual must demonstrate an abnormal physiological resting state that is either chronically excited (hypertensive), or chronically under-aroused (hypotensive). Such a physiological condition is believed to be stress-inducing. Individuals suffering from either of these abnormal arousal levels are motivated to seek activities and/or substances that would presumably adjust or correct the altered resting state with the goal of achieving a more comfortable homeostatic state. For example, an individual with a hypotensive arousal level is likely to find relief in stimulating activities such as gambling and other high-excitement behaviours, temporarily relieving their boredom and possible feelings of depression. It is likely that such individuals would be prone to sensation seeking and risk-taking behaviours. Research has demonstrated that there appears to be a significant relationship between these behaviours and the degree of gambling activity and/or pathology (Kuley & Jacobs, 1988; Coventry and Brown, 1993; Zuckerman, 1994; Langewisch & Frisch, 1998). In contrast, an individual with a hypertensive arousal state would likely benefit more from substances with depressant effects, such as alcohol and/or marijuana. For both types of individuals, the behavior or substance serves to regulate the physiological resting state.

The second factor is a psychological make-up that is characterized by feelings of inferiority, inadequacy, rejection, and/or guilt stemming from childhood, in addition to low self-esteem. The possible cause of these feelings is believed to

be neglect, abuse, or abandonment that occurs during childhood which results in long-standing reactions to such trauma. Both sets of predisposing factors must be present and "exercise their respective effects before an individual will maintain an addictive pattern of behavior in a conducive environment" (Jacobs, 1989, p.39). Martinez-Pina, Guirao de Parga, Fuste I Vallverdu, et al. (1991) supported this theory in finding that pathological gamblers reported feelings of inferiority and rejection in their childhood, showed a higher prevalence of depression than controls, and reported experiencing dissociative states when engaged in gambling behavior.

Jacobs suggests that a conducive environment must accompany the existing predisposing factors for an addictive behavior pattern to develop. In other words, it is probable that an individual will engage in an activity by chance (for example, a trip to a casino with friends) which will in turn normalize or regulate their abnormal resting state as well as alleviate their psychological distress. The "chance-triggering event" subsequently provides instant relief. It must however be sufficient in intensity and novelty to motivate the individual to actively pursue the activity, behavior, or substance in the future.

A core aspect of Jacob's general addictions theory is that addictive behaviours, such as gambling, allow individuals to escape from unpleasant, even painful, realities in their lives. In addition, they can result in feelings of success and invincibility, during the addictive behavior, which the individual might normally not experience. This immediate combined psychological and physical gratification

(e.g. gambling, overeating, alcohol or drug-use) serves initially to maintain the addictive behavior (Jacobs, 1989). The subsequent escape from historic and current stressors resulting from indulging in the addictive behavior may result in a perceived "altered state". This state is due to an accompanying dissociative experience. Such a state allows the individual an escape from the combined biological and psychological distress and is additively reinforcing, rewarding, and believed to play a critical role in maintaining any addictive behavior. The high frequency of dissociation among gamblers on dissociative scales has demonstrated that pathological gamblers indeed gamble to escape their problems and are more likely to go into a trance-like state, lose track of time, and report feeling like a different person (Gupta & Derevensky, 1998; Jacobs, 1988; 2000; Kuley & Jacobs, 1988; Martinez-Pina et al., 1991). Specifically, Jacobs (1989) views addictive behaviour as a form of self-treatment allowing correction of, and escape from, an individual's chronic stress condition. Blaszczynski, McConaghy, & Frankova (1990) found that pathological gamblers were characterized by tendencies toward boredom and depression, and that gambling provided relief from both.

Studies by Jacobs (1982, 1985, 1988, 1989) and Kuley and Jacobs (1988) were the first to identify extremely high rates of dissociative reactions (while participating in the addictive behaviour) that significantly differentiated adult pathological gamblers from adult social gamblers and normative controls. Frequent and pervasive dissociative reactions have also been found among adolescents and

juveniles reporting problem gambling behavior when compared to those with no gambling problems (Gupta & Derevensky, 1998). Studies by Insight Canada Research (1994) and Wynne, Smith, & Jacobs (1996) documented how juveniles who reported progressively more gambling-related problems also reported a progressively increasing presence of each of five dissociative reactions (see Appendix F). The findings of high dissociative reactions among problem gamblers were significantly different from the very low prevalence of comparable dissociative reactions found by those who reported no gambling problems.

Findings of high rates of dissociation while gambling are entirely consistent with Jacobs' General Theory of Addictions (1986). They offer strong support for the position that all addictive patterns of behaviour represent an individual's deliberately chosen "vehicle" that is used to: a) escape from highly stressful internal and/or external reality conditions, and b) experience an altered, much more pleasant state of consciousness (Jacobs, 2000).

Vulnerability-stress models, such as Jacobs' General Theory of Addictions (1986), offer a viable theoretical framework to study the influence of both proximal and distal variables in relation to gambling behaviour and addiction. While Jacobs' theory incorporates both emotional and physiological vulnerabilities, the more recent focus has been primarily on the study of life stress stemming from chronic traumatic stress (emotional, physical and sexual abuse, neglect, and abandonment in childhood and adolescence). With the exception of Gupta & Derevensky's (1998) study with adolescents, there has not been an attempt to

empirically validate Jacob's theory cited in the literature. To date, there has also been no research examining the validity of this model in general with respect to addiction, including gambling, in the elderly population. One of the primary areas of investigation in this study will be to examine the postulates of Jacob's model that suggest that childhood trauma, dissociation and the need for the escape of distraction are associated with problem gambling severity.

Blaszczynski's Typological Model of Gambling

Contemporary psychological models of gambling vary greatly in their conceptualization of what gambling is. Such models include viewing gambling as: an addiction (Jacobs, 1986; Blume, 1987), an unresolved intra psychic conflict (Rosenthal, 1992), a learned behaviour (Anderson & Brown, 1984), the result of irrational or distorted cognitions (Sharpe & Tarrier, 1993; Ladouceur & Walker, 1996), or having it's causation through a biological/psychophysiological dysregulation (Blaszczynski, Winter, & McConaghy, 1986; Lesieur & Rosenthal, 1991). Blaszczynski (2000) points out that the fundamental assumption for each of these models is that pathological gamblers are a homogenous population and that consequently, treatments based on such theories can be applied to all pathological gamblers. He argues that the only way that these various models can be reconciled is if gamblers are accepted as a heterogeneous, rather than homogenous, group.

In a series of long-term outcome studies (McConaghy, Blaszczynski, & Frankova, 1991), Blaszczynski found various differences among gamblers. Some

displayed depressive affect and reported situational stressors that precipitated their gambling. Some were found to have soundly integrated personalities, while others manifested impulsive traits and disruptive behaviours in gambling as well as in other areas of their lives. Some gamblers reported that depression was instrumental in causing loss of control over gambling while in others, gambling caused depression as a result of financial and marital difficulties. Blaszczynski (2000) concluded that specific subgroups of gamblers exist, sharing some common features, but also differing in many respects. He subsequently proposed a model which attempts to integrate many of the factors associated with the contemporary models, including biological, developmental, and environmental determinants of gambling. The model proposes that there are three types of gamblers: those who are not pathological, those that are emotionally vulnerable, and those whose impulsive tendencies are biologically predisposed.

Blaszczynski (2000) suggests that there are three elements that are relevant to all gamblers: ecological determinants, the role of conditioning, and the development of cognitive schemas. Ecological determinants revolve around public policy and the availability of gambling outlets, which research has shown are related to the incidence of pathological gambling (Abbott & Volberg, 1996). The second, classical and operant conditioning, is based on research that demonstrates that problem gambling produces a state of subjective excitement as well as dissociation (Jacobs, 1986). Repeated pairings classically condition the subsequent state of arousal to environments and cues associated with gambling. Through

second order conditioning, these cues elicit an urge to gamble, which results in a habitual pattern of gambling. Blaszczynski (2000) suggests that this process of conditioning explains gambling as an addiction produced through the effects of positive and negative conditioning, tolerance, and withdrawal. The third element is the development of cognitive schemas; early and often repeated wins result in irrational beliefs that may create illusions of control, biased evaluations, superstitious thinking, and erroneous beliefs (Griffiths, 1995; Walker, 1992). The above three factors, common to all gamblers according to Blaszczynski (2000), may be combined to result in habitual gambling practices.

Additional factors may lead to increased problems with gambling which Blaszczynski (2000) divides into three subgroups of gamblers: "normal" problem gamblers, emotionally disturbed problem gamblers, and those who display biological correlates of gambling. With the "normal" subgroup, features such as a preoccupation with gambling, depression and/or anxiety, and substance abuse are all seen as the *end* response to the presence of financial pressures caused by losses due to gambling. Put another way, such symptoms are the consequences, not the cause, of excessive gambling. Blaszczynski suggests that this group is lowest in terms of severity of pathological gamblers and the easiest to treat.

Emotionally disturbed gamblers are characterized by the presence of predisposing psychological factors that make them vulnerable. Participation in gambling is motivated by a desire to meet specific psychological needs and/or modulate affective states. This group may exhibit a familial history of gambling

problems, adverse life events including negative developmental difficulties, and neurotic personality traits. For individuals in this subgroup, the goal of gambling is escape, dissociation, and/or mood alteration. They tend to display higher premorbid psychopathology and difficulties in their ability to cope with and manage external stress. In terms of severity, Blaszczynski views this group as intermediate although likely too fragile to be able to control their gambling. This theoretical subgroup is congruent with aspects of Jacobs' theory, in particular adverse life-events during early development and the concept that gambling relieves a negative affective state. The initiation of problem gambling behaviour is therefore viewed as the *consequence* of, rather than the *cause*, of factors such as depression, anxiety, poor coping skills, and adverse life-events.

The final subgroup that Blaszczynski (2000) proposes is defined by the presence of neurological or neurochemical dysfunction reflecting impulsivity and attention-deficit features. In these individuals, impulsivity precedes the gambling behaviour and is independent of it. Such individuals are likely to display behavioural problems which are independent of gambling, such as substance abuse, suicidality, sensation seeking and criminal behaviour. This subgroup is likely to be resistant to therapy and consequently difficult to treat.

Gambling as an Addiction

As mentioned, the DSM-III (American Psychiatric Association, 1980) was the first to treat compulsive gambling, or pathological gambling, as a separate condition labelling it a "mental disorder". The DSM-III-R (American Psychiatric

Association, 1987) categorized Pathological Gambling as one of several Impulse Control Disorders, vaguely defined as mental disorders characterized by an irresistible impulse to perform harmful acts (McElroy, Hudson, Pope, Keck, & Aizley, 1992). Impulse Control Disorders have three core features: 1.) failure to resist an impulse to perform some act that is harmful to the person or others, 2.) an increasing sense of tension before committing the act, and 3.) an experience of pleasure or release at the time the act is committed (Murray, 1993). Pathological gambling specifically involves repeated failure to resist the urge to gamble, resulting in disruptive patterns that impair the ability to function in personal, family, and occupational roles.

The DSM-IV criteria for Pathological Gambling are as follows: A) Persistent and recurrent maladaptive gambling behaviour as indicated by five (or more) of the following: 1) is preoccupied with gambling (e.g. preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble); 2) needs to gamble with increasing amounts of money in order to achieve the desired excitement; 3) has repeated unsuccessful efforts to control, cut back, or stop gambling; 4) is restless or irritable when attempting to cut down or stop gambling; 5) gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g. feelings of helplessness, guilt, anxiety, depression); 6) after losing money gambling, often returns another day to get even ("chasing" one's losses); 7) lies to family members, therapist, or others to conceal the extent of involvement with gambling; 8) has

committed illegal acts such as forgery, fraud, theft, or embezzlement to finance gambling; 9) has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling; 10) relies on others to provide money to relieve a desperate financial situation caused by gambling; and B) the gambling behaviour is not better accounted for by a Manic Episode.

The DSM category of Impulse Control Disorders is a diagnostic group that is not well understood. In the DSM-IV (American Psychiatric Association, 1994), an "impulse" is not defined and by placing "impulse, drive, or temptation" together, any debate about what is meant by an impulse and what is meant by a drive is completely avoided. Several researchers have brought into question the category's diagnostic validity, especially with respect to gambling. One area of concern is the fact that the DSM does not view gambling along a continuum. An individual either meets the criteria or does not. Most research in the field makes the distinction between "some problem gambling", "problem or disordered gambling", and (probable) "pathological gambling". Under DSM-IV diagnostic criteria, gambling behaviour considered disordered or problematic is only *clinically* problematic if it meets the full criteria. Those falling short of the criteria would not be considered at risk, which in practice, is typically not the case.

Loss of Control

One of the aspects considered core to previous theories of addiction is "loss of control", or "impaired control". Impaired control has long been central to formulations of heavy drinking (Alcoholics Anonymous, 1939; Heather, 1991) and

has more recently been applied to excessive or problem gambling (Dickerson & Baron, 2000), and other examples of behavioural excess (Orford, 1985). Central to the notion of impaired control are issues of being able to resist opportunities to begin an "episode" or session of a behaviour (i.e. drinking, gambling) and to exercise restraint once the behaviour is engaged in. Dickerson (1991) noted that difficulty in maintaining control within a session is quite common in regular gamblers, seemingly more so than difficulty refraining from beginning. In contrast, Kahler, Epstein, & McCrady (1995) reported that based on interviews of alcoholics in treatment, an inability to stop and an inability to refrain (not start) are not independent constructs. Rather, the two behavioural tendencies together might alternatively be indicative of "severe dependence". Using the Scale of Gambling Choices short form (O'Connor, Dickerson, & Phillips, 1995), O'Connor & Dickerson (2002; in press) confirmed that impaired control appears to be a valid construct, with face, construct, and concurrent validity, when examining addictive behaviours including gambling.

One of the arguments against the current use of "lack of control" in definitions of addiction is that DSM-IV diagnoses, including that for Pathological Gambling, are potentially over-inclusive, or too broad, resulting in a problem with "false positives" (Dickerson & Baron, 2000). For example, subjective impairment of control over gambling, defined as consistently violating predetermined limits, is in all probability experienced by a significant proportion of people who gamble regularly (and not necessarily with problem or pathological consequences).

Many treatment professionals and researchers believe that pathological gamblers do not really experience irresistible impulses and that they in fact may retain control over their behaviour (Murray, 1993; Jacobs, 1986). Dickerson (1979) studied individuals placing bets on horses and dogs in a gambling office in Scotland. He observed that those individuals who were frequent betters delayed placing their bets until just before the start of the race. People who follow horse racing carefully spend considerable amounts of time and energy attempting to increase their odds of winning. Studying horses, jockeys and tracks all figure into their calculations (Ladouceur, Giroux, & Jacques, 1998). In the same manner, people who gamble on sporting events will often invest hours examining players, injuries, previous games and match-ups in hopes of increasing their knowledge and subsequently their odds. Even chasing is often a carefully calculated attempt to tap into the 'law of averages'. While not all gamblers (social or pathological) behave in this purposeful manner, these serve as a few examples of how gambling can be a very deliberate and calculated act, rather than a rash, impulsive behaviour. Such patterns of behaviour would seem to be more indicative of someone who has control over his/her actions rather than someone who is acting on impulse alone (Jacobs, 1989; 2000). The differences among individuals on how controlled or impulsive they are in their gambling behaviours is clear and adds further support to Blaszczynski's typological model that gamblers are not necessarily a homogenous group. The issue of control over gambling behaviour will be further examined in this study.

The criteria for pathological gambling in the DSM-III-R (American Psychiatric Association, 1987) were modelled after the criteria for psychoactive substance abuse (from the DSM-III) and included notions such as "tolerance" and "withdrawal" (Lesieur & Rosenthal, 1991). In a similar manner, pathological gambling can also be viewed as an addiction in that a pathological gambler appears to be completely enthralled in the gambling activity and will tend to increase bets in the same way that drug addicts increase their dosage and/or use (Jacobs, 1988; Lesieur, 1988). In addition, pathological gambling is often treated in programs based on or modelled after other addictions (Alcoholics Anonymous, Narcotic's Anonymous, and Gambler's Anonymous). Pathological gambling, in clinical settings, is generally considered analogous to alcoholism and substance abuse as they are often present in the same people, as well as in the same families (Blume, 1987; Lesieur & Rosenthal, 1991). Pathological gamblers have actually been successfully treated in treatment programs with alcoholics and other substance-abuse addicts (Murray, 1993). While pathological gambling differs from substance abuse addictions in that there is no physical drug consumed, gamblers often describe the sensation they experience while gambling in terms that are similar to the sensation substance abusers describe when using drugs or alcohol. Gambling addiction, similar to drug and alcohol abuse, is characterized by increases in tolerance, and cravings, and a consistent need to continue to take the drug or indulge in the behaviour. Neurobiological studies of pathological gambling, focusing on the neurotransmitter systems, have also suggested similarities across

addictions. A link between pathological gambling and other addictive behaviours that likely involve abnormalities in dopamine reward pathways have been documented (Comings, 1998; Berg, Eklund, Sodersten, & Nordin, 1997).

Gambling and Personality Factors

Blaszczynski, A., Buhrich, N., & McConaghy (1985) examined personality variables in pathological gamblers and heroin addicts and came to the conclusion that similar to heroin dependency, gambling is an addictive disorder. Levinson, Gerstein, and Maloff (1983) conducted a series of meta-analyses to try and uncover the sociological, biological and psychological components that may be similar across a variety of disorders that were considered to be addictive. Although they were unable to provide significant empirical support, they concluded that there were similarities across various addictions. Numerous researchers have reported comorbid addictions among addicts, implying that they all satisfy a similar need (Lesieur, Blume, & Zoppa, 1986). Common to all addictions, withdrawal symptoms were experienced by as many as 50% of Gambler's Anonymous members when they stopped gambling (Wray & Dickerson, 1981). In 1987, Carlton and Goldstein investigated the physiological correlates of pathological gambling and concluded that such factors are a necessary requirement of any theory of problem or pathological gambling, similar to theories concerning drug and/or alcohol dependance. This is also consistent with Jacobs' theory and Blaszczynski's model.

Gambling is generally viewed as a form of sensation seeking or risk-taking

behaviour. Zuckerman (1979) suggests that sensation seeking is a trait of temperament, defined by the need for varied, novel and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences. High sensation seekers are always looking for new activities to obtain external sources of increased stimulation. Zuckerman (1994) found that individuals with higher sensation seeking scores were more likely to engage in high risk activities, including gambling, alcohol and drug use, and reckless driving. Other studies have found similar results (Caces, Stinson, & Harford, 1991; Castellani & Rugle, 1995; Coventry & Brown, 1993; Langewisch & Frisch, 1998). Kuley and Jacobs (1988) found that pathological gamblers were not only significantly more likely to be sensation seekers, but also reported more dissociative reactions.

Brown (1986) was one of the first to address the notion of arousal and how it relates to gambling and other addictions in his social learning model. He views arousal as the central phenomenon driving the initiation and persistence of normal and social gambling. Gambling raises the level of arousal which is perceived as pleasant and therefore rewarding to the individual (Leary & Dickerson, 1985). This effect is especially salient to an individual whose normal level of arousal is lower than usual. He proposes that individual differences in sensation seeking influence the drive for arousal and consequently the desire to gamble. His theory suggests that individuals who gamble regularly are likely to lead a lifestyle that does not adequately stimulate them. Under certain circumstances even moderate

sensation seekers could therefore become addicted to gambling, especially if environmental factors in their lives are insufficient to maintain their interest and/or arousal levels.

Research has generally supported this theory. The Canadian Foundation of Compulsive Gambling (1993) found that 65% of adults in Ontario who have gambling problems reported that they gamble for escape and excitement (and consequently increased arousal). Farley (1986) proposed that high stimulation (or sensation) seekers tend to increase their risky behaviours as a result of low arousability. Their lower level of arousability requires such individuals to seek more stimulation to maintain an optimal or comfortable level of arousal. He believes that the difference in arousability among individuals is biologically based. Studies suggest that sensation seeking may be an attempt to correct low cortical activity (Quay, 1965). Other research has found that sensation seeking males demonstrate a stronger (compared to normals) orienting response to novel stimuli, as measured by changes in electrodermal skin conductance (Neary & Zuckerman, 1976), and heart rate (Ridgeway & Hare, 1981). These findings lend support to Jacob's General Theory of Addictions postulate that pathological gamblers are likely to have abnormally depressed arousal levels and subsequently to orient themselves towards activities and behaviours that serve to increase their stimulation.

Research in other addictive fields has provided support for a general theory of addiction. The fact that multiple addictions are common among adolescent and

adult pathological gamblers suggests a link across addictive disorders. However, there is not universal agreement about what exactly constitutes an addiction. The primary area of controversy surrounding the definition of an addiction is substance use versus behavioural activity (Griffiths, 1993). Most professionals in the addictions field have little difficulty accepting the idea of increased consumption of a psychoactive substance (for example, alcohol and illicit drugs) as potentially addictive. However, when referring to behaviours such as gambling, the definition of addiction becomes the primary focus of debate. Traditional views hold that in order for addiction to occur, a chemical substance and subsequent physiological effect must be present. In contrast, modern models of addiction attempt to identify components of excessive behaviour and the effects (i.e. social, occupational, and personal) related to addictive behaviour. In doing so, the definition of addictions is expanding to include behavioural patterns in addition to substance use and abuse.

Gambling and Depression

Considerable research now is demonstrating the important role that life events and daily stressors in personal, familial, social, and financial domains play in both the onset and maintenance of gambling behaviour. Examining the influence of both past and current sources of stress on gambling behaviour may help to explain why certain individuals become vulnerable, and addicted, to at-risk behaviours such as gambling. For the elderly population, disruptive major life events and changes in personal and social environments are more common than for the general adult population. Depressive symptoms in particular may be the result

of, or result in, increased stress and subsequent vulnerability to seek escapist forms of behaviour including addictions.

Research over the past two decades has consistently demonstrated that depression is common among adults diagnosed with addictions, including pathological gamblers. More than 50% of adults diagnosed with various addictions also meet criteria for depression (Simon, Sussman, & Dent, 1995). In 1984, an inpatient study of pathological gamblers by McCormick, Russo, Ramirez, & Taber found that 76% met criteria for a diagnosis of major depressive disorder, 38% for hypomanic, and an additional 8% presented with what were then termed manic-depressive features. Many studies since have reported similar findings (Blaszczynski & McConaghy, 1989; Lesieur & Blume, 1990; Ramirez, McCormick, & Lowy, 1988; Raviv, 1993; Torne & Konstanty, 1992). Blaszczynski, McConaghy, & Frankova (1990) found that pathological gamblers demonstrated tendencies towards both depression and boredom, with gambling providing temporary relief from both.

Getty, Watson, and Frisch (2000) compared members of Gambler's Anonymous (GA) with a non-gambling control sample. They found that both male and female GA members reported significantly higher levels of depression than did controls. In a study of adolescents, Gupta and Derevensky (1998) found that problem and pathological adolescent gamblers reported higher levels of clinical depression than their peers. They suggested that gambling served as an aid for adolescents to cope with their already existing depression. Other studies have

found similar results (Fisher & Bellringer, 1996; as cited in Gupta & Derevensky, 1998; Ohtsuka, Bruton, DeLuca, & Borg, 1997). Frank, Lester, and Wexler (1991) conducted a study of 500 members of Gambler's Anonymous and found that 48% had contemplated suicide and 13% had in fact attempted to end their lives. It must be noted however, that it is difficult to infer the direction of a potential causal relationship between depression and gambling addiction, or any addictive behaviour. It is difficult to determine if depressive symptomatology results in the seeking out of addictive behaviours, or if conversely, engaging in addictive behaviours such as gambling results in "reactive" depressive features.

Clinical depression may be a symptom or expression of overwhelming stress that one is incapable of dealing with, and/or an expression of a hypotensive physiological resting state (Gupta & Derevensky, 1998). Following Jacobs' theory, depression is likely to precede an addiction, since the addiction is seen as the "treatment" for an unpleasant reality. Addiction, specifically gambling, provides the lacking stimulation, the subsequent dissociative state, and the resulting escape from an unpleasant reality and the pain associated with it. The gambling activity in such a case, may serve as self-medication, an anti-depressant per se (Raviv, 1993).

Depression and Older Persons

Depression in older adults is a major health issue, not only because of it's high prevalence, but additionally because of it's adverse health consequences. Approximately 10% to 25%, perhaps as high as 40% (Martin & Haynes, 2000) of

community-dwelling older persons suffer from symptoms of depression (Broadhead, George, & Tee, 1990; Bruce, McAvay, Raue, et al., 2002; DasGupta, 1998). When compared to their non-depressed peers, persons with depression are usually older, more often female, have lower socioeconomic status, and have poorer health (Beekman, Deeg, van Tilburg, et al., 1995).

Research suggests that the incidence of depression increases with age (Palsson, Ostling, & Skoog, 2001). In addition, depressed older adults are more likely than their non-depressed peers to engage in unhealthy and self-destructive behaviours, such as smoking, excessive alcohol intake, physical inactivity, and unhealthy eating habits (Aneshensel & Huba, 1983; Martin & Haynes, 2000). A study by Alexopoulos (2001) found that socially isolated men were not only more likely to suffer from depressive symptomatology, but were also four times as likely to have been alcohol dependent prior to the age of 50, and 14 times as likely to have been heavy smokers. These findings further suggest a link between depression in later-life and a tendency towards addiction.

Depression has been shown to discourage older individuals in particular from obtaining adequate medical services and social support (Penninx, Leveille, & Ferrucci, 1999). Approximately 15% of all untreated depressed patients eventually commit suicide while up to 70% of suicide victims suffer from depression. The prevalence of suicide increases in older populations. The suicide rate for 80 to 84 year-old individuals is 26.5 per 100000, compared to 12.4 for the general population (DasGupta, 1998).

Depressive symptoms in older adults are associated with increased risk of disability, increased mortality and impaired psychosocial functioning (Flint & Silveira, 2001). Their depression is often first-episode, persistent (lasting on average 3 years or until mortality), and related to physical illness and/or pain (Denihan, Kirby, & Bruce, 2000). Research suggests that the relationship between these factors is often reciprical in that physical disability or pain and health concerns may lead an individual to become depressed, while depression appears to exacerbate difficulties with physical and health ailments (Prince, Harwood, Thomas, et al., 1998).

Stress and Life Events

A relationship between changes or difficulty in activities of daily living, negative life-events, poor social support, and depression has been shown in several studies, implying that the onset of depressive symptoms is often triggered by negative life-events, difficulty adjusting to change (for example, loss of structure and social ties as a result of retirement), or bereavement (Bruce, McAvay, Raue, et al., 2002; Denihan, Kirby, Bruce, et al., 2000; Martin & Haynes, 2000). Harlow, Goldberg, & Comstock (1991) examined bereaved widows and found a consistent association between poor health and higher levels of depressive symptoms after bereavement. Bodenmann, Schwerzmann, & Cina (2000), using the Daily Hassles Scale (DHS) (Holm & Holroyd, 1992) found that depressed individuals, compared with controls, experience more stress in all areas of their lives and reported a higher number of critical life events with regard to

health problems and social conflicts. The depressed group also scored significantly higher than controls on the DHS.

Research has repeatedly demonstrated that severe discrete life-events as well as major chronic difficulties figure strongly into etiological models of a variety of different psychopathologies (Brown & Harris, 1989; Brown, Harris, & Hepworth, 1994). The severe events are major or traumatic in magnitude and are qualitatively different from other types of stress (such as normative stressful processes and worry) as they generally have a discrete onset and only affect a small proportion of the general population at any given time (Compas, Orosan, & Grant, 1993). Among the elderly, such events may include diagnosis of a life-changing illness, loss of loved ones, and a sudden loss of independence often due to changes in physical health. Brennan & Moos (1990) found that in an older population problem-drinking men and women both reported more overall, and recent, negative life-events, as well as more chronic stressors than did non-problem drinkers. Problem drinkers also endorsed significantly less social support from family and friends, and higher overall levels of depressive symptomatology.

Brown and Harris (1989) were the first to discuss a stress-vulnerability model in relation to depression in later-life. They postulated that vulnerability factors interact with stressful life events and lead to depression. This interaction may occur in at least two ways. Vulnerable individuals may expose themselves to life circumstances and generate stressful events that promote depression (vulnerability to depression is mediated by stressful life events). Secondly,

vulnerable individuals may be more prone to develop depression when exposed to stressful life events than persons with lower vulnerability, so that vulnerability enhances the impact of stressful life events in contributing to depression.

Both stressful life events and vulnerability are frequent in the elderly. In a study conducted by Alexopoulos (2001), more than 50% of the subjects with major depression or sub-syndromal depression had at least one stressful event within a 3-month period. More than 60% of the depressed participants had either a trait vulnerability (suggesting an early root such as trauma), expressed as a high level of neuroticism, or vulnerability related to their life circumstances (long-term difficulties including poverty, chronic illness in the family, or the burden of being a caregiver). Neuroticism and long-term difficulties were shown to increase the impact of even mild stressful life events in promoting depression. Moreover, they found that long term difficulties increased the risk for depression in elderly individuals even in the absence of stressful life events. This model appears to fit well with Jacobs' General Model of Addictions, whereby a predisposition possibly triggered by early childhood maltreatment, or vulnerability, coupled with environment, or subsequent stressful life events, may lead individuals to a depressive state and a subsequent need to self-medicate.

The role of social support in the onset and maintenance of depression in older adults has also been widely studied. Denihan, Kirby, Bruce, et al. (2000) used an operationalized procedure for measuring and identifying social network type, which was based on the number and frequency of contacts with family,

friends, and neighbours and participation in clubs and groups. Using such a measure provided a relatively free from bias report of social support, compared with asking individuals about their satisfaction with their social network. While they did not find a relationship between prognosis (i.e. recovery from depression) and social support, their findings suggested that poor social support may have been involved with the onset of depressive symptoms. Similarly, Henderson, Korten, Jacomb, et al. (1997) reported that lower social support was predictive of higher depression scores on follow-ups of three to four years.

Similar to many biopsychosocial disorders, including gambling, family history of depression is considered to be a predictor of potential depression in individuals, including older adults. Van Ojen, Hooijer, Bezeme, et al (1995) found a significant relationship between familial history of mental problems and depression in later-life. Denihan, Kirby, Bruce et al. (2000) similarly found a significant association between family history of depression and depressive symptoms in later life. They concluded that both intrinsic factors (genetic predisposition) and extrinsic factors (including ill-health and bereavement) independently contribute to the likelihood of late-life depression.

As a result of often comorbid psychological and physical conditions, depression in older adults often goes undiagnosed and untreated compounding the negative effect it has on this segment of the population. Depression may be underestimated or under-diagnosed as many older adults tend to minimize psychological symptoms and attribute the somatic symptoms, such as sleep

disturbance and fatigue, to physical health causes. Older adults often do not exhibit the classic symptoms of depression or may have comorbid conditions such as dementia or Parkinson's disease that mask symptoms (Palsson, Ostling, & Skoog, 2001). Bereavement, which becomes more common as people grow older and suffer more losses of friends, family, and independence, may not only trigger depression, but may also be difficult to distinguish from depression (Friedrich, 1999).

Coping Styles

Sharpe and Tarrier (1993) propose that one of the differences between those who can control their gambling versus those who cannot is related to their tendency to use different coping styles or skills. Concordantly, difficulties with gambling or problem gambling behaviour occur when an individual exhibits poor problem-solving or self-control skills, or when situational factors reduce the efficacy and availability of such skills.

Adaptive coping styles generally include the utilization of solution-focused and problem-solving strategies that allow an individual to consider various options when confronted with different situations and problems. Faulty, or poor, coping processes tend to include an elevated use of emotion-focused responses to stressful situations that usually involve avoidance, negatively centered affective strategies, and rumination (Endler & Parker, 1990). Poor coping skills can consequently be viewed as a predisposing factor to the initiation and maintenance of problem gambling behaviour (Sharpe & Tarrier, 1993).

Adapting negative or faulty coping styles can be viewed as a vulnerability that may stem from an environmental or biological basis, or a combination of both. An individual may fail to learn to use appropriate coping skills and rather adopt a faulty coping style. A biological predisposition may also serve to reduce coping skills, or the ability to use them. Preliminary research examining the interaction between coping style and level of gambling behaviour has shown that individuals with problem gambling behaviour are more likely than non-gamblers, or social gamblers, to use a predominant avoidant or emotion-oriented coping style (Gupta & Derevensky, 2000).

For older individuals who are often dealing with many life changes and stressors, effective coping would presumably be especially important, serving as an important mediator between negative life events, situational stress, and physical as well as psychological well-being. Effective coping would likely help to decrease the effects of stress and life-change, while ineffective coping may exacerbate such effects. Assuming that coping style can act as a buffer between the occurrence of stressful life events and ability to adjust, it follows that some coping strategies would be more adaptive than others.

The majority of the studies on coping over the past 20 years have included scales that measure two coping dimensions: emotion-focused coping and problem-focused coping. The emotion-focused dimension includes strategies that involve self-preoccupation, fantasy, or other conscious activities related to the regulation of affect. Problem-focused coping styles alternatively tend towards strategies that

try to solve, minimize, or reconceptualize the negative effects of a difficult or problematic situation. Endler & Parker (1992) include a third coping dimension, avoidance-oriented coping, which involves person-oriented and/or task-oriented reactions. Strategies associated with this coping style generally include attempts at distraction, by engaging in an unrelated task, or reaching out to others for social contact and diversion.

Coping strategies that include attempts at problem-solving have been shown to be related to fewer potential difficulties with gambling, substance use and mental health problems (Ebatta & Moos, 1994). Getty, Watson, & Frisch (2000) reported that GA members demonstrated more maladaptive coping styles than controls, even when variance due to depression was controlled. Moos, Brennan, Fondacaro, & Moos (1990) used the Coping Response Inventory (CRI) to examine the relationship between coping strategies, life stressors, and alcohol use. The CRI incorporates both the *focus* of coping (i.e. problem focused, emotion focused, and avoidance focused) as well as *method* of coping (cognitive or behavioural). They conducted a large community survey of older individuals and found that problem drinkers were more likely than non-problem drinkers to employ cognitive and behavioural avoidance coping strategies. The problem drinkers who relied on avoidance coping also tended to report more depression and physical symptoms, and less self-confidence. Regardless of the type of coping employed, problem drinkers reported more negative life events and severe stressors. Other studies have found results similar to these (Moos, Fenn, Billings, & Moos, 1989;

Moos, Finney, & Chan, 1981).

Positive and other problem-solving based coping strategies may act as a protective factor against the potential negative effects of situational, environmental, and physical stress. In contrast, emotion-focused and avoidance coping strategies have been shown to relate to a greater frequency of mental health problems, substance abuse, and depression (Holahan & Moos, 1987). Maladaptive coping styles may serve as a mediating factor between the occurrence of stress and engagement in an addictive behaviour or activity. Consequently, individuals who employ such strategies, as opposed to positive problem-solving styles, may be more at-risk for developing an addiction than others. This assumption fits the first and second types of gamblers in Blaszczynski's model and Jacobs General Theory of Addictions where by a maladaptive coping strategy increases the likelihood of an already predisposed individual in a stressful situation to seek out an activity that would serve to not only regulate his or her level of arousal, but also offer an escape from the unpleasant perception of reality.

Physical Illness

Very little research has examined the relationship between physical illness, pain and addictive behaviours, with the exception of when the drug of addiction is pain medication. As previously noted, one of the major difficulties for older persons is the adjustment to changes in their health and ability to physically function independently. It has been hypothesized that one of the possible causal factors behind late-onset drug or alcohol use in the older population is that it

serves as a means of self-medication; a way to treat or escape from physical and/or psychological pain (Wells-Parker, Miles, and Spencer, 1983; Nowak, 1985). However, the few studies that have examined the relationship between addictive behaviours and health concerns have yielded varying results.

Lorenz & Kaffee (1986), in a rare examination of the relationship between gambling and somatic complaints, looked at 206 compulsive gamblers, aged 15-77. They found that during the desperation phase of gambling (see Custer, 1982; as cited in Lorenz & Kaffee, 1986) 46% reported symptoms of depression, 42% had digestive problems, and 35% complained of insomnia. Following an extended period of abstinence, the frequency of symptoms declined. What this study demonstrated was that during various stages of gambling pathology, individuals may be likely to experience some somatic symptoms. It did not however examine whether or not the presence of physical symptoms may have initially contributed to the onset, or maintenance of the gambling behaviour.

Other research areas in the addictions field have examined the relationship between stressors such as physical illness, financial problems, and addictive behaviours, in particular alcohol use. Linsky, Strauss, & Colby (1985), in a general adult population, found that poor health, personal problems, and difficulties at work lead to fluctuations in alcohol use and drinking problems. Similar findings were reported by Marlatt & Gordon (1985) and Parker & Brody (1982). Brennan & Moos (1990) studied an older population and reported that both male and female problem drinkers reported more difficulties with physical

health than did non-problem drinkers.

In contrast to the lack of research examining physical health and addiction, there is considerable research that has looked at the relationship between difficulties with illness and depression, specifically in older adults. In an international study of older residents of London, England, and New York, USA, Gurland et al. (1983) reported that the degree of physical illness was the most consistent correlate of pervasive diagnosed depression (i.e. in need of clinical treatment). They concluded that physical illness and/or disability were the major determinants of depression in older adults. While other studies have supported these findings (Conlin & Fennell, 1983), some researchers have focused specifically on aspects of physical illness.

Linn, Hunter, & Harris (1980) reported that after controlling for level of physical disability, physical illness no longer predicted degree of depression. They suggested that physical disability, as opposed to poor health in general, may be the primary factor accounting for depression among older adults who are physically ill. Badger (2001) similarly found that older individuals with declined ability to function, due to physical disability, were more likely to be depressed. Another specific factor that has been investigated is chronic pain. Parmalee, Katz, and Lawton (1991) supported earlier research by Romano & Turner (1985) in finding a significant association between pain and depression. While depression was correlated with physical illness severity and functional disability, the correlations did not account for the association between depression and pain.

Williamson and Shulz (1992) attempted to clarify the relationship between the various types of physical difficulties and depression in older adults. They found that regardless of whether objective measures (physician-rated) or subjective measures (self-report questionnaires) were used, physical illness was the strongest predictor (compared to degree of social support, financial worries, and daily concerns or hassles) of depression in an older population. Specifically, measures of pain were the single highest predictor of depressive symptomatology. It should be noted that the researchers did not clarify whether or not the pain was chronic in nature or of recent onset. Although not as strong, they did find that social support, physical disability and financial concerns were strongly related to depressive symptomatology as well.

Assuming a stress-vulnerability model such as Jacob's (1986), increased stress, negative life-events including early childhood trauma, ill health, poor coping style, and depressive symptomatology, would presumably result in an increased risk of developing late-onset at-risk behaviours including gambling. It is unclear as to whether or not depressive symptomatology, "caused" by stress, life events, poor coping, and health problems, would lead directly to gambling behaviour or rather, if these variables independent of depression may predict problems with gambling. One of the goals of this study is to investigate this issue using qualitative measures.

Overall, given the higher than normal levels of stressful life difficulties, as well as depression, in older adults, it is probable that older persons would be more at-risk to develop problem gambling behaviours. While the potential individual

contribution of each factor is unclear, the combination of all factors strongly suggests such a hypothesis. Increased accessibility, social acceptance, and desire for social contact only serve to elevate the likelihood of problem gambling behaviour.

Gambling in Older Persons

Despite being raised during the difficult economic situation of the Great Depression Era, during which time gambling was typically viewed as a sin or vice and morally disreputed, older adults now account for the largest age group of annual visitors to Las Vegas (Las Vegas Convention and Visitor's Authority, 1996). In Florida, retired individuals account for 34% of all the casino gamblers who visit casinos more than four times per year, and the average gambler in Florida is "between 50 and 70 years old, retired or a blue collar job worker, with an average household income of $20,000-$30,000 a year (Executive Office of the Governor of Florida, Office of Planning and Budgeting, 1997; as cited in McNeilly & Burke, 2000). In a more recent study, McNeilly and Burke (2001) researched the prevalence of casino gambling as a social event for senior citizens (age 65 and over) in Iowa and Nebraska. They found that casino gambling and bingo were the most frequented social activity for the almost 7,000 senior citizens sampled, in a survey of retirement centre activity directors.

A relatively small number of studies have examined problem or pathological gambling specifically in an older population. Studies by Widgery (1998), Abbott, Sheran, and Sherrets (1995), and Shaffer, Hall, & Vanderbilt

(1997) suggested that disordered gambling in the older persons was a growing, and unrecognized, public health problem. The National Opinion Research Council (NORC) (1999) reported that the number of individuals over the age of 64 who had ever gambled increased by 45% between 1975 and 1997, with the percentage of women who had ever gambled having risen 20% in just a four year period (1994-1998).

Overall estimates of prevalence rates of problem and pathological gambling vary across the few studies that have investigated them. Most reports have either conducted random phone surveys, or looked at percentages of individuals who have sought treatment, either at clinics, through their family doctors, or through help phone lines. Neufeld & Burke (1999) reported that 6.3% (46/734) of individuals who accessed problem gambling services in British Columbia were age 55 or older. In the same study, only a small percentage (3.5%) of those who called a help line were age 55 or older; of those individuals, 15.5% played bingo, 34% gambled in casinos, 14% played the lotteries, and 19% participated in some form of electronic gambling. Of interest, 70% of senior gamblers (over age 55) also reported some form of "chronic pain". Thomas (1996), in a sample of 154 adults 55 years or older, found that two percent of respondents reported that they had a gambling problem, while five percent admitted to gambling at least once a day. Three percent reported borrowing money to cover gambling debts, and 10 percent had conflicts with loved ones over gambling. In terms of gambling attitude, 25% of participants believed betting with a friend for money was not gambling, nor was

playing the stock market (19%). Despite the fact that 90% of respondents had gambled at some point in their lives, 25% disapproved of gambling and 39% "approved" but felt it should be regulated in a more strict manner. For the majority of the group, lottery tickets, raffles, and bingo were the gambling activities of choice. Thirteen percent of the older population admitted to losing track of time (a form of dissociation) when gambling, while five percent of those who drank alcohol admitted their drinking had increased as they were spending more time in lounges of casinos since gambling was introduced. Of note, seniors who were in the lower economic bracket, were part-time employed, or drank alcohol in lounges were most likely to view depression as a "reason for gambling". One of the key points that the author of the study suggested was the need to find alternatives for gambling for seniors (Thomas, 1998).

Hirsch (2000) reported that in a random phone survey of 800 individuals age 65 years or older, 1.4% were problem gamblers, while only 0.4% were probable pathological gamblers (according to the SOGS-R). In contrast, a report published by the Citizen Advocacy Society of Lethbridge, AB (1995) found that out of 129 individuals age 65 and over who completed surveys (including the SOGS), 10.9% scored in the range of problem gamblers.

Few studies have examined the relationship between age and gambling behaviours. Earlier research tended to be observational in style with virtually no controls or empirical design (McNeilly & Burke, 2000). Those early findings suggested that there was a general decline in gambling participation with increased

age as well as a tendency to withdraw from multiple types of gambling and concentrate on more limited activity (Kallick, Suits, Dielman & Hybels, 1979; as cited in McNeilly & Burke, 2001). It should be noted that studies such as these were conducted prior to the proliferation of gambling venues outside of Las Vegas and Atlantic City. Only a few of the more recent studies examining the relationship between gambling and age have examined individuals over the age of 65. These studies did not directly examine any potential links between age and problem gambling (Black & Moyer, 1998).

Retired and older adults are often the target of special gambling establishment incentive offers, especially for groups, including free admissions and/or buffets, free transportation and discounts on hotel visits, with the added bonus of being in a social situation with peers and friends. Casinos will often offer players memberships card programs, especially for slot machines, which may provide promotional bonuses such as discounted prices on prescriptions, vitamins, and medical supplies. McNeilly and Burke (2000) found that "inexpensive meals" were the only promotion that served as a significant motivator for seniors casino gambling.

The primary motivation for gambling for most older adults, who generally play slot machines, is excitement and entertainment. Hirsch (2000) found that most older individuals gamble to escape problems, or they need money, or they are looking for a place to go where they won't be judged (based on their age). It has been suggested that gambling may serve to improve self-esteem in older

individuals. Through gambling, they once again feel like they are a part of the society that has typically excluded or ignored them (Campbell, 1976). Mok & Hraba (1991), in a telephone survey, found that seniors (65 and over) tend to migrate towards games like bingo and suggested that such migration may be due less to a need for excitement, and more so to an increased desire for social interaction. Similarly, gambling may result in a renewed interest in life. Advocates suggest that homes for the elderly would be well advised to allow their members to gamble as it keeps them alert and involved rather than sedate and recluse. As casinos and bingo establishments proliferate, gambling may provide a large number of seniors a cognitively stimulating form of entertainment in a safe and social environment that was not available to them in their earlier years.

However, the combination of stressful life events (including physical and social or spousal loss), potential biological vulnerability (genetic predisposition), and generally elevated stress among older adults leaves many in this age group especially vulnerable to developing problem gambling behaviour. Loneliness following the loss of family members, a spouse, and friends, combined with the anxiety and dysphoria that may result from changes in health and life-style, can be experienced as a loss in self-esteem and self-efficacy (Gatz, Kasl-Godley, & Karel, 1996). Being forced to move from familiar surroundings, losing social and community involvement, loss of autonomy, and financial concerns may also lead to feelings of isolation and loneliness. As a result, older adults may turn to gambling as a means of excitement and escape to relieve their feelings of dysphoria and

inadequacy. Wynne Resources (1998) found that non-problem gamblers were more likely to be married or living common-law, and to have an annual household income of $80,000 or more.

Middle-aged and older women (who comprise the largest proportion of the older adult population due to typically longer life-spans) have been observed to be among the fastest growing group of those who gamble to relieve feelings of isolation, boredom or loneliness (Chrostowski, 1997). Additionally, reports from several treatment facilities indicate a shortened rate (between one to three years) for the time it takes for those who gamble with the intention of relieving negative feelings of isolation, loneliness and boredom, to reach a crisis stage in their gambling (Fowler, 1997). What initially begins as a new and easily accessible activity that allows increased social interaction may develop into a potentially devastating addiction.

McNeilly & Burke (2000) reported four cases of older adult problem gamblers they felt were representative of the 15 they had seen in their geriatric psychiatric clinic. All 15 individuals who presented with gambling problems were "new" versus "life-long" gamblers (they first began to gamble later in life). In addition, for the majority of the patients, their presenting problem was not difficulty with gambling; evidence of their problem gambling behaviours emerged during the course of treatment. The four cases they presented were initially diagnosed with a depression continuum disorder (depression or dysthymia), similar to the majority of patients they treated for gambling difficulties. Common

complaints included feeling very lonely and bored, social isolation, and worthlessness. The individuals cited reasons such as relaxation, excitement, and social contact as initial motivators for gambling. Similar to many people with gambling problems, they denied that they felt they had a problem with gambling but could not deny that they "lost track of time" (dissociated) and "spent more than they intended".

The lack of research on older gamblers may be due in part to the fact that their attraction to gambling has been largely viewed as a relatively harmless form of socializing and recreation for a cohort that typically lacks accessibility to such opportunities. Older adults also typically try to solve problems on their own and as such are less likely to seek professional treatment, especially for something that they might find embarrassing or be hesitant to admit. Doupe (1999) found that gambling in seniors might result in financial, family/relationship, and/or health related issues. The study also suggested that "seniors" hesitate to use treatment services due to access barriers, stigma, denial, and embarrassment. Participants recommended that the province should provide educational seminars, increase advertising for services, and provide outreach services targeted specifically towards the seniors' population.

The literature has yet to address what might lead some older adults specifically to develop problematic gambling behavior while others are able to maintain their gambling activity at a recreational level. Although it appears that gambling might serve as a relief from dysphoric feelings for older adults, it is as yet

unknown what leads some to become pathological gamblers. In addition, the literature to date has yet to seriously explore the possible correlates of, and predispositions towards, gambling among older adults (McNeilly & Burke, 2001). As previously discussed, there are numerous studies examining such factors in the general adult population, but none that this researcher was able to find that look at older adults specifically. The majority of the literature over-represents the age 25-44 cohort and under-represents individuals 65 and older (Wynne Resources, 1998).

Purposes of this Study

There are several areas in the literature that this paper investigated. Firstly, one of the goals of this study was to assess the utility of the Jacobs' Neglect, Abandonment, and Abuse Protocol (J-NAAP; 2002) with an older adult population of non-problem and problem- gamblers. Investigating the relationship between the presence or absence of childhood trauma, as well as dissociation, allowed an examination of the applicability of Jacob's theory to older adults. This study also examined the degree of depressive symptomatology, negative life-events, coping strategies, health/physical difficulties, and perceived stress, in older non-problem and problem-gambling samples. Evaluating the relationship of these factors with gambling levels and history of abuse, neglect, and abandonment as measured by responses on the J-NAAP allowed an investigation of which factors predict the possible presence of problem gambling behaviour.

This study qualitatively explored the reasons for individual's initiation into

gambling and where applicable, maintenance of that gambling behavior. Using semi-structured interviews allowed participants to elaborate on their responses which provided information regarding the time line of events that led to their problem gambling as well as giving them the opportunity to express in their own words what factors they felt played a role in the onset and maintenance of their gambling behaviour. In addition, this paper investigated whether or not problem gambling behavior in elderly people is associated with difficulties with impulse control, a need for escape, and/or dissociation. Although various opinions exist in the academic and applied fields of addictions and psychology, the majority of research suggests that problem gambling behaviour is related to impulse control difficulties with gambling, at least in adolescents and adults. A goal of this study was to determine whether or not this theory holds true for older problem gamblers as well, and to further examine whether or not escape through dissociation is related to problem gambling behaviour.

The final area of focus was to examine whether or not dissociation during recent gambling is more common in individuals who were abused and who dissociated in childhood. The questions that address dissociative reactions during gambling alloweded for an examination of the possible relationship between early dissociative reactions in response to childhood trauma and current dissociative reactions while gambling. Jacobs' (personal communication) proposes that those who dissociated early, in an attempt to escape negative events, will be likely to use dissociation throughout the life-span for the same purpose. One of the questions

that was addressed is: Does early dissociation increase the likelihood of later dissociation? In other words, does dissociation become a learned coping strategy, even at a relatively early age?

Hypotheses

1. The literature suggests that individuals with addictive behaviours tend to report greater difficulty with depression (Simon et al., 1995), stress (Bondenmann et al., 2000), medical difficulties (Lorenz & Kaffee, 1986) and type of coping strategy employed (Moos et al., 1990). The first hypothesis of this study is that no-risk and low-risk gamblers will report significantly fewer difficulties with depression, perceived stress, and physical/medical difficulties than moderate to problem gamblers. In addition, no and low-risk gamblers will be more likely to report positive coping strategies, as opposed to negative strategies, than moderate to problem gamblers.

2. Dissociation is believed to be one of the rewarding components of gambling and research has demonstrated that problem gamblers tend to report more dissociation than social gamblers (Kuley & Jacobs, 1988). Similarly, loss of control has been found to be a key component in severity of problem gambling (Dickerson & Barron, 2000). In this study, the group of moderate-risk to problem gamblers is hypothesized to be more likely to report loss of control and dissociation during gambling, and dissociation in general than the no-to-low risk group. Measures of loss of control, including the impulse control features of the DSM-IV criteria for Pathological Gambling, and dissociation will be highly

correlated with degree of problem gambling severity.

3. According to Jacobs' theory (1986), chronic stress stemming from childhood trauma is key to the onset and maintenance of any addictive behaviour, including gambling. The third hypothesis of this study is the majority of the older moderate-to-problem gamblers will report a childhood history of one or more instances of neglect, emotional, physical, or sexual abuse, and/or abandonment (as measured by the Jacobs' Neglect, Abuse, and Abandonment Protocol, or JNAAP, 2002). Individuals who report a history of childhood trauma will report a greater degree of gambling difficulties than those who do not report childhood trauma.

4. Jacobs' (1986) suggests that addiction allows an individual to escape from unpleasant realities through dissociation. It is likely that dissociation, perhaps as a means of coping, is first learned in childhood, especially for individuals who were abused in their youth. The "effectiveness" of dissociation in allowing the person to handle the traumatic situation serves to reinforce the use of dissociation making it an enduring method of handling stress throughout the life. It is therefore hypothesized that individuals who endorse a childhood history of either neglect, abuse, or abandonment, coupled with past dissociative reactions, will be more likely than those who do not report childhood trauma to experience dissociative reactions while gambling and in general.

5. Research suggests that there is a significant relationship between addictive behaviours, including gambling, and depression (Frank et al., 1991), stress (Brown et al., 1994), physical difficulties (Lorenz & Kaffee, 1986) and type of coping style

(Ebatta & Moos, 1994). It is hypothesized that the combination of depressive symptomatology, perceived stress, medical and/or physical difficulties, and negative coping styles will significantly predict degree of gambling difficulties.

6. Based on Jacobs' (1986) theory, it is hypothesized that reported childhood trauma will moderate the relationship of depression, perceived stress, medical and physical difficulties, and coping strategy with degree of gambling difficulty.

Qualitative Analysis

The final focus of this study is exploratory in nature. Using qualitative analysis with semi-structured interviews, the relationship between feelings of depression, need for escape, negative life-events and associated stress, change in social circumstance, loneliness and/or boredom, and difficulties with health and the initiation and maintenance of problem-gambling behaviour will be investigated. Of particular interest is the time-line associated with these factors and gambling. One question that will be examined is: Do these factors occur prior to the onset of problem-gambling behaviour and subsequently serve to maintain problem gambling behaviour or are these factors a consequence of problem gambling behaviour?

Chapter II

Method

Participants

There appears to be some disagreement in the literature as to what constitutes an older adult, specifically for the purpose of research. McNeilly and Burke (2000, 2001) classified individuals as "older" at the ages of 65 and up. Some studies have used the age of 60 as a cut-off, while others use age 55. For the purpose of this study, "older adults" are adults over the age of 55. Using this cutoff allowed for examination of a wider, more diverse range of the population permitting a broader investigation of the potential relationship between degree of gambling difficulties and various factors generally associated with older age.

Forty males (44%) and 51 females (56%) participated in and completed the study. Ages ranged from 55 to 85 years with a mean of 66.9 years (SD = 8.5). The majority of participants (93.4%) either rented or lived in their own home. Education ranged from grade school to completion of a graduate degree.

Measures

The first questionnaire subjects filled out was a series of questions asking them about basic demographic information and gambling behaviours and activities. This questionnaire can be found in Appendix E. Complete demographic characteristics can be found in Table 1.

The Jacobs' Neglect, Abandonment and Abuse Protocol (J-NAAP, 2002) (Appendix C) was used to assess early (under age 18) instances of neglect,

Table 1

Demographic Characteristics of Participants (n=91)

Characteristic / Responses	Frequency	Percent	Total
Gender			91
Male	40	44.0	
Female	51	56.0	
Age			91
55-59	21	23.1	
60-69	36	40.0	
70-79	25	27.5	
80-85	9	9.9	
Residence			91
Assisted living	3	3.3	
Rental	21	23.1	
Live with family	3	3.3	
Own home	64	70.3	
Education			91
Grade school	4	4.4	
Some HS	34	37.4	
HS Degree	22	24.2	
Some college	15	16.5	
Coll. Degree	13	14.3	
Grad. Degree	3	3.3	
Annual Income Present			83
$0-15000	8	9.6	
$15001-30000	23	27.7	
$30001-45000	28	33.7	
$45001-60000	16	17.6	
$60001+	8	9.6	
Annual Income Pre-retire			70
$0-15000	2	2.9	
$15001-30000	20	28.6	
$30001-45000	22	31.4	
$45001-60000	16	22.9	
$60001+	10	14.3	

abandonment, and abuse in individuals. The J-NAAP is a detailed, systematic, social history questionnaire about the presence or absence of listed traumas in an individual's life before the age of 18. There is no "score" since all such traumas are considered aversive. While there are a collection of independent studies on the J-NAAP completed and in progress, to date none have been published. A test-retest reliability study is currently being conducted in Oregon and results are expected to be available sometime in 2003-2004. At the present time, there are no estimates of internal consistency, reliability or validity availabel for the JNAAP. Alpha could not be determined for this study because of the small number of participants who acknowledged neglect, abuse, or abandonment.

The JNAAP consists of five sections dealing with 1) Loss or abandonment, 2) Serious neglect, 3) Physical abuse, 4) Emotional abuse, and 5) Sexual abuse. For each subscale, participants are asked whether or not they experienced any of the incidences in question and then asked the same 10 questions for each section. All questions are retrospective in nature asking individuals to comment on negative occurrences, and related feelings and attitudes, that may or may not have occurred during their childhood and/or adolescence. Questions address issues such as severity of the individual's experience, who they feel was most reponsible, and how their family reacted. The J-NAAP also questions whether or not individuals experienced one or more of a set of dissociative reactions while trauma was occurring.

An earlier version of the JNAAP, the J-NAP (which did not include the

Loss and Abandonment Scale), was used in a series of independent recent studies comparing four different groups of addicts; adult Caucasian pathological gamblers (ACPG), adult First Nations pathological gamblers (AFNPG), adult female substance abusers (AFSA), and juvenile substance abusers (JSA) (Jacobs, personal communication, October 1, 2002). They were compared on four areas of the J-NAP: early childhood traumas (ECT), multiple childhood traumas (MCT), most frequent type of trauma (MFT), and whether or not they dissociated during the trauma (DDT). Findings are congruent with Jacobs' Theory: the vast majority of participants reported some form of childhood trauma with emotional and physical abuse being the predominant forms. In addition, the presence of dissociation during trauma ranged from 67-100%. A summary of the results are listed below in Table A.

Table A

Initial Findings of the Jacobs' Neglect and Abuse Protocol (J-NAP)

Addicts	ECT	MCT	MFT	DDT
ACPG	80%	80%	83% (Emotional)	86%
AFNPG	88%	93%	87% (Physical)	100%
AFSA	75%	83%	87% (Physical)	83%
JSA	47%	33%	60% (Emotional)	67%

General measures (as indicated by the JNAAP) of whether or not individuals experienced neglect, abuse, or abandonment, and whether or not

participants experienced dissociation during childhood trauma, will be examined in this study. An examination of the number of and/or particular types of trauma, as reported in the table above, will not reviewed as they are beyond the scope of this paper.

The Canadian Problem Gambling Index (CPGI - Appendix K) (Ferris & Wynne, 2001) will be used to assess degree of problem gambling behaviour. The CPGI is a nine item questionnaire that was designed to distinguish between no-risk gamblers, at-risk gamblers, and problem gamblers. Scores range from 0 to 27 as each item is scored from 0 to 3. A total score of 8 or greater is considered indicative of probable problem gambling. A scores of 0 suggests no-risk, scores of 1-2 indicate low risk, while scores of 3-7 suggest individuals are at moderate to high-risk for developing problem gambling. An example of a question in the CPGI is: "How often have you bet more than you could really afford to lose?" Responses for all questions are either: never, sometimes, most of the time, or almost always. The scale was originally designed with 31 items, but through item and factor analysis was abbreviated to nine core items that focus specifically on aspects of problem gambling, specifically adverse consequences of gambling and gambling behaviours. Reliability of the CPGI is good with an internal consistency alpha of 0.84. Test-retest reliability was also good at 0.78. The CPGI has good face validity and demonstrated good criterion-related validity, correlating with the DSM-IV and SOGS at 0.83 (Ferris & Wynne, 2001). Alpha for the CPGI for this study was similar to previous findings at .79.

The Windsor Gambling Screen for Older Adults (WGSOA) (Frisch & Fraser, 2003) (Appendix H) at the time of this study was a preliminary 19-item questionnaire that was designed specifically to examine gambling behaviours and problems in a population of individuals over the age of 55. The questionnaire has since been finalized and cut-down to 16 questions. The original questions were derived by asking problem gamblers and their families what they believed were the most salient indications or signs that someone may be a possible problem or pathological gambler. An example of the questions in the WGSOA is: "When you are feeling bad does gambling make you feel better"? All questions are scored 1 or 0 based on a "yes" or "no" response.

Research is currently being conducted to determine the validity, reliability, and appropriate cutoff scores of the WGSOA. The WGSOA will be used solely as a collaborative scale in this study to examine the relationship between it and the established screens [the CPGI and the Scale of Gambling Choices (SGC)].

The Geriatric Depression Scale (Appendix G) (GDS; Brink, Yesavage, Lum, Heersema, et al., 1982) was developed specifically to assess depression in older persons. It consists of 30 true-false items. Scores of 0-9 are considered normal to minimal depressive symptoms. Scores of 10-19 are considered to meet criterion for mild to moderate depressive symptomatology, while scores greater than 20 are indicative of probable clinical depression with higher scores suggesting severe depression (Brink et al., 1982; Brink, 1984; Yesavage, 1987). A sample question of the GDS is: "Are you basically satisfied with your life"?

The GDS is one of the most widely used screens in hospitals and other care settings for evaluating depression in older individuals. The GDS has been used in countless studies and successfully tested for reliability and validity on a number of different older populations, regardless of examiner (Brink, 1985). Dunn & Sacco (1988) found that the psychometric properties of the GDS also remain unaltered when the instructional set is varied. In a follow-up investigation, they also showed that the GDS was not only a valid measure in institutional settings, but was also reliable and valid in an older community population (Dunn & Sacco, 1989) concluding that the GDS generalizes across widely differing samples of older adults. Alpha for the GDS in this study was very good at .82.

When compared to other common depression scales, such as the Zung Self-Rating Depression Scale (SDS; Zung, 1965), the GDS was shown to be superior in terms of concurrent validity and noncompletion rate. No differences in validity were found between "old" elderly persons (75 years and older) and "young" elderly persons (age 60-74 years) (Dunn & Saco, 1989). Means for normal, healthy elderly subjects were confirmed in a study by Rich (1993), who found means of 4.5 (SD = 4.97) for young adults (age 18-38), of 2.25 (SD = 2.29) for young-old adults (age 60-72), and of 3.20 (SD = 3.67) for old-old (age 73-85) adults.

The Medical Outcomes Study 20-Item Short-Form (MOS-SF-20 - Appendix L) (Stewart, Hayes, & Ware, 1988) will be used to measure the physical and social domains of health-related quality of life. The MOS-SF-20 measures six

domains of functioning: physical functioning, role functioning, social functioning, mental health, health perceptions, and pain. Participants are asked to rate the extent to which their health interferes with their abilities to perform physical activities (e.g. walking, carrying groceries), usual daily activities (e.g. work, housework), or social activities (e.g. visiting friends). Participants are also asked to rate their current health in general, and extent of bodily pain in the past four weeks. The following is an example of the questions included in the MOS-SF-20: "In general, would you say your health is: excellent, very good, good, fair, poor"?

The reliability of the MOS-SF-20 has been well established, including for use with older individuals (Ware, Sherbourne, & Davies, 1992). Cronbach's alphas ranged from .70 to .87 across a number of studies (Badger, 2001; Stewart et al., 1988). Alpha of the MOS-SF-20 for this study was .77.

The Coping Inventory for Stressful Situations (CISS) (Appendix I) (Endler & Parker, 1990) is a self-report measure that is used to assess the coping behaviours individuals employ in response to difficult, stressful, or upsetting situations. The CISS consists of 48 items, 16 items in each of three subscales: task-oriented, emotion-oriented, and avoidance-oriented coping. The avoidance scale has two sub-scales: distraction (8 items) and social diversion (5 items). Task-oriented items consist of active, planning strategies such as "determine a course of action and follow it" and "adjust my priorities". Emotion-oriented strategies include statements that involve self-preoccupation of fantasy such as "feel anxious about not being able to cope" and "get angry". Avoidance strategies

include ways of escaping stressful situations including "going for a walk" or "go to a party". The normalized mean score for each of the subscales is 50 (SD equal to 10). Distraction items on the avoidance subscale are focused on engaging in substitute tasks while social diversion items are focused on seeking out others. A sample item from the CISS asks individuals about their tendency to "schedule their time better" with responses ranging from "not at all" (scored 1) to "very much" (scored 5).

The CISS has strong internal consistency with coefficient alphas ranging from .76 to .92 for the various subscales. Alpha for this study for the entire scale was .83. Test-retest reliabilities are also high ranging from .60 to .73 across the various subscales (Endler & Parker, 1990).

The Perceived Stress Scale (PSS) (Appendix J) (Cohen, Kamarck, & Mermelstein, 1983) is a ten-item Likert-type rating scale developed to quantify the psychological construct of "perceived stress". It is commonly used with populations that suffer from some form of physical difficulties, including HIV+ and AIDS, cancer, and other illnesses where the disability or prescribed medication may result in physical symptoms that may be misconstrued as stress (Cole, 1999). The scale does not address typical somatic symptoms of stress (i.e. sleep difficulties, physical tension, nausea, headache, etc.) and as such is ideal for any population where such symptoms may occur more typically than average. It incorporates questions that address difficulties with daily hassles as well as typical areas of extended, or chronic stress. "How often have you felt that things were

going your way" is an example of questions in the PSS with responses ranging from "never" (scored as 1) to "very often" (scored as 5). The PSS has been tested and retested for internal and external validity with significant positive findings. In a large sample (n=2264), Cole (1999) found that there was no meaningful differential item functioning by sex, race, or education. Alpha for the PSS for this study was .70.

The Scale of Gambling Choices (O'Connor, Dickerson, & Phillips, 1995) (SGC - Appendix M) is a short form of the original 18 item scale designed by Baron, Dickerson, & Blaszczynski (1995). The original scale was based on observational data of off-track gamblers (Dickerson et al., 1990) and a study of gamblers' perceptions of impaired control (Corless & Dickerson). The 18 items covered the desire to limit or stop gambling and thus spending more than intended to (Baron et al., 1995). The resulting three factors from the studies, although high with respect to internal reliability, were difficult to interpret and consequently, the 12 items that loaded strongly on one of the factors were selected for the shortened version. The 12 items cover cues for commencing a gambling session and control issues concerned with terminating a session and behavioural intentions to resist gambling. Research with the scale has demonstrated high reliability at an alpha of .94 (O'Connor & Dickerson, 2001; in press). This study found obtained an alpha of .87 for the SGC.

The 12 questions of the SGC are scored with a 5 point Likert type rating scale along the semantic categories of "very rarely, rarely, sometimes, often, very

often" which are scored, respectively, 1, 2, 3, 4, & 5. In addition, the "does not apply" box at the end is scored as 0. Items 3, 4, 5, 6, 8, 9, 11, & 12 are reverse scored. The following is a sample question of the SGC: "I have found it difficult to limit how much I gamble". To obtain a total score for the scale, the scores for each statement are added together. The higher the score, the less the respondent has been able to control their gambling during the past 12 months.

Procedure

Ethical clearance for the study was received from the University of Windsor Research Ethics Board. Participants were recruited for participation by two methods. First, problem-gambling older persons from a local treatment group were offered the opportunity to participate in the study. These participants were contacted by phone and asked if they were willing to complete a series of questionnaires and possibly an interview. All of these subjects were previously screened to meet the criteria for problem or pathological gambling, as measured by the SOGS (Lesieur & Blume, 1987). The second method of recruitment was through poster and newspaper adds placed in the community. Advertisements included a phone number and e-mail address where the primary researcher could be contacted. Posters were placed in both Windsor, Ontario and Ottawa, Ontario as both communities have easy access to local casinos, bingo halls, and race tracks. All participants were offered a gift certificate for Shopper's Drugmart in the amount of $20.00 for participating in the study. Participants received and signed informed consent forms. All participants were asked to complete all measures.

Measures were given in the same order for all participants. They were informed that they had the right to omit any questions they were uncomfortable with. In addition, subjects were offered the opportunity to participate in a semi-structured interview focusing on possible factors related to problem gambling (Appendix E). An additional $5.00 gift certificate was offered to individuals who successfully referred somebody else to participate in the study. Two individuals in the study received this additional compensation. Individuals who reported no lifetime gambling activity were excluded from the study.

CHAPTER III

Results

Preliminary Analyses

The following results are separated into two sections; the first will review the findings of the quantitative analyses and the second will examine the results of the qualitative analyses.

Participants were divided into two groups based on their scores on the Canadian Problem Gambling Index (CPGI): no-risk and low-risk gamblers (NLG - scores of 0-2 on the CPGI), and moderate to high-risk gamblers and probable problem gamblers (MPG - scores of 3-27 on the CPGI). For the purpose of further analysis, subjects were also divided into two groups based on whether or not they reported any instances of childhood abuse, neglect, or abandonment. Data was analysed with SPSS 10.0. Several statistical procedures were employed including frequency and descriptive data, non-parametric tests of independence, and parametric univariate and multivariate analysis including correlations and ANOVAs. Logistic regressions were used to examine the relationship between and the predictive strength of the independent variables and the level of gambling severity. In addition, a qualitative approach with a thematic focus was used to examine participant responses on a semi-structured interview. General findings are initially presented followed by a breakdown of results organized by hypothesis.

Gambling Behaviour of Participants

Participants were asked about their general gambling behaviour,

frequency, and preferred gambling activities. All participants had gambled at least once in their lifetimes. Two individuals who responded to the advertisement were excluded from the study as they had not gambled in any manner over their life span. Analysis of variance (ANOVA) revealed no significant differences between males (n=40) and females (n=51) for any measures, including the CPGI, the WGSOA and the SGC. In addition, an ANOVA indicated there were no significant differences between participants from Windsor (n=55) versus Ottawa (n=36) on any measures.

Table 2 displays the gambling behaviour and frequencies of the participants. Overall, 85 out of 91 (93.4%) of participants had been to a casino at some point in their lives. The most common gambling activity was buying lottery tickets with over 95% of participants indicating that they had done so in the last year. Almost half (44.8%) indicated that they still buy lottery tickets on a weekly basis. Of the gambling activities involving personal involvement and activity, bingo was the most commonly played game with 64.8% having been to bingo hall in the past year, and 20.3% still playing on a weekly basis. Despite the fact that bingo was the most common game, 56% of participants reported that slots was their favourite game to play.

Forty-four percent of participants indicated that they had been to Casino Windsor, while 87% reported having gambled at a casino outside of Windsor. The relatively low percentage of those who have been to Casino Windsor may be attributable to the fact that 36 out of 91 participants were not from the Windsor

Table 2

Gambling Characteristics of Participants (n=91)

Characteristic	Frequency	Percent
Casino Windsor	40	44.0
Casino Non-Windsor	79	87.0
Frequency of Casino Visits (n=85)		
Weekly	11	12.9
Monthly	10	11.8
Few Times/Year	36	42.4
Less than Annual	28	32.9
Lottery (n=87)	87	95.6
Weekly	39	44.8
Monthly	14	16.2
Few Times/Year	23	26.4
Less than Annual	11	12.6
Bingo (n=59)	59	64.8
Weekly	12	20.3
Monthly	4	6.8
Few Times/Year	8	13.6
Less than Annual	35	59.3
Favourite Games*		
Bingo	13	14.3
Black Jack	16	17.6
Lottery	6	6.6
Poker	13	14.3
Slots	56	61.5

*Favourite Games: Only games listed by more than one individual were included. Most participants listed more than one favourite game, or game most commonly played. The cumulative percentages is therefore over 100.

area. Of those who live in the Windsor area, 40 out of 55 (73%) reported having been to the Windsor Casino.

Gambling Groups

As previously mentioned, the CPGI was used to classify participants in to two groups: No-risk and Low-Risk Gamblers (NLG) and Moderate-to-High-Risk and Problem Gamblers (MPG). There are two reasons for using this division as opposed to dividing the participants into four groups (No-Risk, CPGI = 0; Low-Risk, CPGI = 1-2; Moderate to High, CPGI = 3-7; and Problem, CPGI = 8-27). It was anticipated prior to the study that their would be an insufficient sample size to permit statistical comparison of four groups. The breakdown of scores on both the CPGI and the SGC can be found in Table 3. Examining the sample used in this study reveals that 47 (51.6%) of participants scored in the No-Risk range, 16 (17.6%) in the Low-Risk range, 15 (16.5%) in the Moderate-to-High Risk range, and 13 (14.3%) in the Problem Gambler range. The latter three groups are not large enough to statistically compare. The other reason for the division was that the goal of the study was to examine not only individuals who were problem gamblers, but also those that demonstrated characteristics that suggested they may develop into problem gamblers. Moderate and high-risk scores on the CPGI suggest the potential for such a development. Of note, no significant differences were found between the two gambling groups in terms of age ($t=.057$, $p=.954$).

The SGC, although not considered a diagnostic tool for problem gambling, serves as an indication of the degree of control, or lack there of, that individuals

Table 3

CPGI and SGC Score Frequencies of Participants (n=91)

Scale	Score	Frequency	Percent	Cum. Percent	Grp Cutoff
CPGI	(range 0-27)				
	0	47	51.6	51.6	-----No/low risk
	1	5	5.5	57.1	
	2	11	12.1	69.2	
	3	8	8.8	78.0	----Mod/high risk
	4	3	3.3	81.3	
	5	2	2.2	83.5	
	6	1	1.1	84.6	
	7	1	1.1	85.7	
	8	1	1.1	86.8	----Prob/path
	9	1	1.1	87.9	
	10	1	1.1	89.0	
	11	2	2.2	91.2	
	12	4	4.4	95.6	
	13	1	1.1	96.7	
	14	1	1.1	97.8	
	15	1	1.1	98.9	
	17	1	1.1	100	
SGC	(range 0-60)				
	0	28	30.8	30.8	
	1	2	2.2	33.0	
	2	4	4.4	37.4	
	3	6	6.6	44.0	
	4	1	1.1	45.1	
	5	2	2.2	47.3	
	6-10	3	3.3	50.6	
	11-15	11	12.1	62.7	
	16-20	10	11.0	73.7	
	21-25	8	8.8	82.5	
	26-30	4	4.4	86.9	
	31-35	3	3.3	90.2	
	36-40	3	3.3	93.5	
	41-45	5	5.5	99.0	
	46-50	0	0.0	99.0	
	51-55	1	1.1	100	

demonstrate when it comes to gambling. This study used the SGC as a means of examining the relationship between degree of problem gambling (CPGI) and loss of control during gambling. The relationship between these scales will be examined during the results for Hypothesis 2.

Correlates of Gambling Behaviour and Pathology

A final area of participant's gambling that was investigated was factors and behaviours that are typically believed to relate to individuals' gambling behaviour and severity of problems associated with gambling. These items were taken from the WGSOA validation study and can be found in Appendix H. The sample reported very high percentages for history of psychological difficulties. Out of the 83 participants who completed the questions (eight individuals did not complete the questionnaire), 22.9% reported that they had at some point in their lives received professional care because of physical or emotional problems brought on by stress. Over a quarter (25.3%) of the sample indicated that they had felt seriously depressed at some point in their lives. Familial history of difficulties with addictive behaviours was also very high: 21.7% reported that they had a problem or pathological gambler in their immediate family, and 39.8% stated that someone in their family had an alcohol or drug problem. None of these findings are especially surprising given the relatively high number of participants who reported moderate-risk or problem gambling behaviour, and the established relationship between these factors and problem gambling in the literature. Summarized results from the gambling correlates questions can be found in Table 4, as well as a

Table 4

Gambling Correlates and WGSOA Scores of Participants (n=83)

Correlate	Frequency	Percent	Cum. Percent
Family History of Gambling			
Yes (non-problem)	16	19.3	19.3
Problem/Path. Gambler	18	21.7	41.0
No	49	59.0	100
Alcohol/ Drug Problem - Individual			
Yes	7	8.4	8.4
No	76	91.6	100
Alcohol/Drug Problem - In Family			
Yes	33	39.8	39.8
No	50	60.2	100
Ever Felt Seriously Depressed			
Yes	21	25.3	25.3
No	62	74.7	100
Thought Of/Attempted Suicide Due to Gambling			
Yes	1	1.2	1.2
No	82	98.8	100
Received Professional Care For Stress			
Yes	19	22.9	22.9
No	64	77.1	100
WPGS Scores			
0-2	41	49.4	49.4
3-6	24	28.9	78.3
7-10	7	8.4	86.7
11-15	9	10.9	97.6
16-19	2	2.4	100

frequency breakdown of scores on the WGSOA. While the scores on the WGSOA were not used as a primary measure in this study, it is worth noting that the correlation between the CPGI and the WGSOA was extremely high with $r = .868$, $p < .001$. This finding suggests the possibility that while the CPGI is well validated on the general population, there may be other components of problem gambling in older persons that it does not address. In spite of this, based on the established reliability and validity of the CPGI, the CPGI will serve as the primary measure of problem gambling severity for this study.

Analyses and Results By Hypothesis

Hypothesis 1

The first hypothesis was that individuals who scored in the no-risk to low risk range (NLG) on the CPGI would report significantly fewer difficulties than moderate-risk to problem gamblers (MPG) on all of the independent variables, including depression (GDS), perceived stress (PSS), and physical or medical problems (MedTot). In addition, NLGs would be significantly more likely than MPGs to report the positive coping strategy of task-oriented coping (Ctask). In contrast, MPGs would be more likely to report the negative coping strategies of emotion-oriented (Cemot), avoidance-oriented (Cavoid) and it's subscales, distraction (Cadis) and social diversion (Casocdiv).

As expected, MPGs as a group scored higher than NLGs on the GDS, PSS and MedTot scales. Out of the entire sample, 14 participants scored in the mild to moderate depression range on the GDS: 12 of the 14 were MPGs. Five out of six

who scored in the probable depression range were also MPGs. Of those that scored in the MPG range, 16 out of 20 scored in the moderate to severe depression range on the GDS. MPGs also scored higher on the measures of negative coping strategies, Cemot, Cavoid, and the two subscales of Cavoid, Cadis and Casocdiv. Conversely, the average score on the positive coping strategy, Ctask, was higher for the NLGs than for the MPGs. Table 5 lists the descriptive statistics for the aforementioned variables for both groups.

Table 5

Descriptive Statistics for Independent and Dependent Variables: No-to-Low Risk GamblersGroup (NLG - CPGI=0-2) and Moderate Risk-to-Problem Gamblers Group (MPG - CPGI=3-27)

Measure	No to Low-Risk (n=63)			Mod. to Probl. Gamblers (n=28)		
	Mean	SD	Range	Mean	SD	Range
CPGI	0.43	0.8	0-2	7.68	4.5	3-17
MedTot	6.17	6.7	0-29	14.75	7.7	1-27
PSS	20.00	6.1	10-38	27.96	7.2	16-39
GDS	4.12	4.7	0-26	11.42	7.9	0-28
Ctask	53.97	11.9	17-76	47.67	8.6	31-62
Cemot	34.95	9.6	15-59	49.46	12.2	26-75
Cavoid	41.77	11.7	17-65	48.79	8.3	25-65
Cadis	18.29	5.7	8-32	23.86	4.6	12-34
Casocdiv	15.02	5.6	5-25	16.86	3.7	7-24
SGC	5.30	7.0	0-24	29.29	10.8	13-52
Dissgamb	0.44	0.7	0-3	2.18	1.4	1-5
Dissgen	0.87	0.9	0-4	1.61	1.3	0-5
Impgamb	0.21	0.4	0-2	1.50	1.1	0-3

CPGI=Canadian Problem Gambling Index; MedTot=Medical Outcomes Study Short Form Total Score; PSS=Perceived Stress Scale; GDS=Geriatric Depression Scale; Ctask, Cemot, Cavoid, Cadis, and Casocdiv=Coping Inventory for Stressful Situations, subscales Task-oriented, Emotion-oriented, Avoidance-oriented and it's two subscales Distraction and Social Diversion, respectively; SGC=Scale of Gambling Choices; Dissgamb=Dissociation during gambling questions; Dissgen = Dissociation in general questions; Impgamb=DMS-IV Impulse Control Criteria.

A discriminative function analysis was conducted to predict group membership from a set of predictors. The first step in a discriminative analysis is a one-way univariate analysis of variance (ANOVA). The findings of the ANOVA are used to examine the significance of the differences between groups for a set of predictor variables. In a one-way between-subjects ANOVA, problems created by different group sizes are relatively minor (Tabachnick & Fidell, 1989). Harris (1975) suggests that for two-tailed tests, the ratio of sample sizes of largest to smallest should not be greater than 4:1 to ensure robustness. The differences between the two groups in this study [moderate-to-problem gamblers (MPGs) to no-risk-to-low-risk gamblers (NLGs) is less than 3:1. In addition, Levene's test of homogeneity of variance is used to determine whether or not variance within the groups is significantly different. Examination of the Levene's test results revealed that the variances for each variable, with the exception of impulse control difficulties and avoidance oriented coping, between each of the groups (MPGs and NLGs) were not significantly different. For the most part therefore, the two groups appear to meet the assumption of homogeneity of variance.

The next steps in a discriminant functions analysis are to evaluate the canonical discriminant functions or canonical variables which include the eigenvalues, Wilks' Lambda, the structure matrix, and the group centroids. These can be found in Table 6. The eigen value is the ratio of the between-groups sum of squares to the within-groups sum of squares. The canonical correlation measures the association between the discriminant scores and the groups with higher values

Table 6
Discriminant Function Analysis: Summary of Canonical Discrimiant Functions

A: Eigenvalue	Canonical Correlation
2.236	.831

B: Wilks' Lambda	Chi-square	Sign (p)
.309	96.304	p<.001

C: Structure Matrix

Variable	Function (Correlation)
SGC	.890
Dissgamb	.555
Impgamb	.551
Cemot	.433
GDS	.385
MedTot	.384
PSS	.379
Cadis	.323
Dissgen	.206
Cavoid	.203
Ctask	-.179
Casocdiv	.113

D: Function at Group Centroids

Group	Function
MPGs	2.200
NLGs	-0.994

indicating a stronger relationship. Table 6 shows an eigen value of 2.236 and a canonical correlation of .831 indicating a very strong relationship between the gambling severity groups and the discriminant scores for the independent, or predictor, variables.

Wilks' Lambda is the proportion of the total variance in the discriminant scores not explained by differences among the groups. The lower the value the

greater the difference between the groups means. Wilks' Lambda for this analysis was .309, $p<.001$ indicating that the overall means between the two groups on all of the variables are significant.

The structure matrix of the discriminant analysis contains within group correlations of each predictor variable with the canonical function providing another way to evaluate the usefulness of each variable in the discriminant function. Review of Table 6 shows that scores on the scale of gambling choices, dissociation during gambling, impulse control difficulties and emotion-focused coping were the strongest with all variables showing substantial effects on group membership. The final discriminant analysis, group centroids, shows that the average discriminant, or canonical variable score for moderate-risk to problem gamblers was 2.200 compared with -.994 for no-to-low risk gamblers.

Results of the discriminant function analysis indicated that with the exception of social diversion as a coping strategy (Casocdiv), all differences between the two gambling severity groups on all measures were found to be significant to at least the .05 level. Complete results of the ANOVA component of the discriminant analysis are presented in Table 7. MLGs, in comparison to NLGs, reported significantly greater difficulties with depression (GDS), $F(1,89) = 30.06$, $p < .001$, perceived stress (PSS), $F(1,89) = 29.08$, $p<.001$, and health issues (MedTot), $F(1,89) = 29.03$, $p<.001$.

Table 7
Discriminant Analysis: ANOVA for Independent and Dependent Variables: No and Low-Risk Gamblers vs. Moderate-Risk and Problem Gamblers (n=91)

Measure		df	Mean Square	F	Sign(*p*)
GDS	B/W Groups	1	1033.5	30.06	<.001***
	W/In Groups	89	34.4		
MedTot.	B/W Groups	1	1425.5	29.03	<.001***
	W/In Groups	89	49.1		
PSS	B/W Groups	1	1229.6	29.08	<.001***
	W/In Groups	89	47.5		
Ctask	B/W Groups	1	762.9	6.32	.014*
	W/In Groups	88	120.7		
Cemot	B/W Groups	1	4062.6	36.95	<.001***
	W/In Groups	88	110.0		
Cavoid	B/W Groups	1	948.3	8.11	.005**
	W/In Groups	88	116.9		
Cadis	B/W Groups	1	597.8	20.50	<.001***
	W/In Groups	88	33.5		
Casocdiv	B/W Groups	1	65.4	2.52	.116
	W/In Groups	88	26.0		
SGC	B/W Groups	1	11150.8	158.8	<.001
	W/In Groups	89	70.2		
Dissgam	B/W Groups	1	58.3	62.00	<.001
	W/In Groups	89	.94		
Dissgen	B/W Groups	1	10.4	8.80	.004
	W/In Groups	89	1.2		
Impgamb	B/W Groups	1	32.4	61.02	<.001
	W/In Groups	89	0.53		

*p<.05, **p<.01, ***p<.001

NLGs as a group were significantly more likely to employ a positive task-oriented (Ctask), coping strategy than MLGs, $F(1,88) = 6.32$, $p<.05$. MLG's were more likely than NLGs to employ negative coping strategies including emotion-oriented (Cemot), $F(1,88) = 36.95$, $p<.001$, and avoidance-oriented (Cavoid), $F(1,88) = 8.11$, $p<.01$.

Findings suggest that those who score in the moderate-risk to problem gambling range are more likely to have experienced difficulties with depression, stress, and overall health over the past 12 months than individuals in the no-to-low risk gambling range. Moderate-risk and problem gamblers are more likely to use negative coping strategies in response to situational stress while no-to-low risk gamblers tend to employ positive coping strategies during similar experiences.

Hypothesis 2

Moderate-risk to problem gamblers (MPGs) were hypothesized to report greater difficulties with control and dissociation associated with gambling, as well as greater dissociation in general than no-to-low risk gamblerse (NLGs). The descriptive statistics for both groups on measures of control associated with gambling (SGC), impulse control criteria of the DSM-IV (Impgamb), dissociation during gambling (Dissgam), and dissociation in general (Dissgen) can be found in Table 5. Questions for each measure can be found in Appendix I. Results of a one-way ANOVA comparing the MPGs with the NLGs are listed in Table 7 (previous page).

Overall, 47/91 (51.6%) of participants reported some form of dissociation

during gambling and 60/91 (65.9%) reported dissociation in general. Table 7 shows that MPGs reported significantly ($p<.001$) higher scores than NLGs for the SGC, Dissgam, and Impgamb measures. The measure of dissociation in general (Dissgen) was also significantly higher for MPGs, $F(1,89) = 8.80$, $p < .01$. Results indicate that moderate-risk and problem gamblers are more likely to experience problems with control during gambling, and tend to experience a greater frequency of dissociative reactions during gambling and in their everyday lives.

The relationship between loss of control, dissociation, and gambling severity was examined using bivariate correlations. Results are listed in Table 8. The relationships between all variables were significant at $p<.001$. Of note, the correlation between the WGSOA and the SGC was also extremely high with $r = .868$ ($p < .001$). This is not surprising given the high correlation between the CPGI and the WGSOA ($r = .859$, $p < .001$). Current research is being conducted on the WGSOA to further examine it's relationship to well validated and established gambling screens such as the CPGI.

Results of this study suggest gambling severity is strongly associated with loss of control regarding gambling behaviour, measured with both the SGC and the DSM-IV gambling impulse control criteria. Dissociation during gambling, and in general, was also found to be strongly related to both gambling severity and control difficulties during gambling.

Hypothesis 3

Examination of the data revealed that out of 91 participants, 35 (38.5%)

Table 8
Bivariate Correlations Between CPGI, SGC, Dissgam, Dissgen, and Impgamb: Full sample (n=91)

Variable	CPGI	SGC	Dissgam	Dissgen	Impgamb
CPGI	1.00	.859*	.833*	.452*	.824*
SGC		1.00	.798*	.451*	.731*
Dissgam			1.00	.539*	.801*
Dissgen				1.00	.370*
Impgamb					1.00

*p<.001

reported emotional, physical, or sexual abuse. Out of those, 12/35 (34.3%) scored in the problem gambler range (8-27) on the CPGI. An additional 7/35 (20%) scored in the moderate-to-high risk range. In total, 19 out of 35 (54.3%) individuals who reported childhood trauma scored in the MPG range on the CPGI.

It was hypothesized that the majority of participants in the MPG range would report a childhood history of trauma. Overall, of the 28 individuals who had scores of 3 or greater on the CPGI, 19 (67.9%) reported some type of childhood trauma (CHT) on the JNAAP. Closer examination revealed that 12 out of the 13 (92.3%) participants who scored 8 or greater on the CPGI (problem gamblers) reported CHT. Chi-square analyses revealed a significantly higher percentage of CHT in those who scored in the moderate-to-problem gambling range on the CPGI (X^2=13.46, p<.001).

Table 9 displays the descriptive statistics for participants who reported childhood trauma (CHT) and those who did not (NCHT) on all measures.

Table 9

Descriptive Statistics for Independent and Dependent Variables: Childhood Trauma (CHT) and No Childhood Trauma (NCHT)

Measure	CHT (n=35)			NCHT (n=56)		
	Mean	SD	Range	Mean	SD	Range
CPGI	5.23	5.5	0-17	1.05	1.9	0-12
SGC	19.66	16.7	0-52	8.32	9.6	0-42
MedTot	12.22	8.7	0-29	6.68	6.8	0-29
PSS	26.11	8.5	11-39	20.16	5.7	10-38
GDS	9.74	8.0	0-28	4.26	4.8	0-26
Ctask	49.00	9.9	31-72	53.92	11.8	17-76
Cemot	44.26	13.9	21-75	36.41	10.4	15-59
Cavoid	45.89	10.8	25-65	42.72	11.4	17-62
Cadis	21.97	5.7	9-34	18.78	5.8	8-29
Casocdiv	15.42	4.8	6-24	15.69	5.4	5-25
Dissgamb	1.57	1.5	0-5	0.60	0.9	0-4
Dissgen	1.57	1.3	0-5	0.80	0.0	0-3
Impgamb	1.09	1.2	0-3	0.30	0.6	0-3

Similar to the comparison of MPGs and NLGs, the average scores for the CHT group are higher than the NCHT on the CPGI, SGC, MedTot, PSS and GDS measures. The CHT group was also higher on three of the negative coping strategy inventories (Cemot, Cavoid, and Cadis) while the NCHT had a higher average on the positive coping strategy inventory (Ctask).

A one-way ANOVA was conducted to examine whether or not the differences observed in Table 9 between the two groups were significant. Analyses revealed that the Childhood Trauma (CHT) group scored significantly higher ($p<.001$) on the measures of gambling severity (CPGI), lack of control associated with gambling (SGC), depressive symptomatology (GDS), perceived stress (PSS), and health difficulties (MedTot). Those who reported childhood trauma (CHT)

also scored significantly higher on measures of dissociation [Dissgam; $F(1,89)=14.6$, $p<.001$, and Dissgen; $F(1,89)=10.9$, $p<.01$] and the negative emotion-oriented [Cemot; $F(1,88)=9.31$, $p<.01$] and distraction-oriented coping strategies [Cadis; $F(1,88)=6.5$, $p<.05$]. Participants who did not report childhood trauma were significantly more likely to report the positive task-oriented coping strategy [Ctask; $F(1,88)=4.21$, $p<.05$]. Complete results of the ANOVA are presented in Table 10.

Hypothesis 4

It was hypothesized that those who reported dissociation during childhood trauma would be more likely than individuals who did not report childhood trauma or did not dissociate during trauma, to report current dissociative reactions either during gambling or in general. The Chi-square test (X^2) for contingency tables, or test of independence, was used to evaluate this hypothesis. The X^2 test of independence is a statistic used to test for independence of two categorical variables whose frequencies are arranged in a contingency table. Assumptions of this statistic are that observations in separate cells are independent, and that the categories are mutually exclusive and exhaustive (each participant has to fit into one category of each variable). The assumptions were met for this analysis. Chi-square is sensitive to any type of difference in the populations and as a result is nonparametric; the hypotheses contain no parameters. The null hypothesis in this study therefore would be that there are no differences between the two groups. Examination of the expected versus observed frequencies in the contingency table

Table 10
Analysis of Variance (ANOVA) for Independent and Dependent Variables: Those Who Reported Childhood Trauma vs. Those Who Did Not (n=91)

Measure		df	Mean Square	F	(p)
CPGI	B/W Groups	1	375.4	27.23	<.001***
	W/In Groups	89	13.8		
SGC	B/W Groups	1	2767.7	16.83	<.001***
	W/In Groups	89	164.4		
GDS	B/W Groups	1	645.6	16.67	<.001***
	W/In Groups	89	38.7		
MedTot.	B/W Groups	1	663.4	11.51	<.001***
	W/In Groups	89	57.7		
PSS	B/W Groups	1	763.4	16.07	<.001***
	W/In Groups	89	47.5		
Ctask	B/W Groups	1	519.3	4.21	.043*
	W/In Groups	88	123.4		
Cemot	B/W Groups	1	1314.3	9.31	.003**
	W/In Groups	88	141.2		
Cavoid	B/W Groups	1	213.4	1.70	.195
	W/In Groups	88	125.8		
Cadis	B/W Groups	1	217.6	6.50	.013*
	W/In Groups	88	33.5		
Casocdiv	B/W Groups	1	1.5	.055	.815
	W/In Groups	88	26.7		
Dissgam	B/W Groups	1	20.0	14.6	<.001***
	W/In Groups	89	1.4		
Dissgen	B/W Groups	1	12.7	10.9	.001**
	W/In Groups	89	1.2		
Impgamb	B/W Groups	1	13.2	17.6	<.001***
	W/In Groups	89	0.75		

*p<.05, **p<.01, ***p<.001

allows for inferences into directionality of any differences between groups (Toothaker & Miller, 1995). Table 11 shows the contingency tables for

Table 11
Chi-square Test of Independence Contingency Tables
A. Dissociating During Childhood Trauma and Dissociating During Gambling

		Dissociation During Childhood Trauma		
		Yes	No	Total
Dissociation During Gambling	Yes	Obs. 22 Exp. 15.5	Obs. 25 Exp. 31.5	47
	No	Obs. 8 Exp. 14.5	Obs. 36 Exp. 29.5	44
	Total	30	61	91

$X^2 = 8.41$, $p < .01$
Obs.= observed (actual) frequencies of participants in each cell
Exp.= expected frequencies for each cell (according to the X^2 statistical model)

dissociation during gambling. Analyses indicate that there was a significant difference in dissociation during gambling ($X^2 = 8.41$, $p < .01$) between those who reported childhood trauma and dissociation versus those that did not. Inspection of the observed and expected frequencies reveals that participants who reported dissociation during childhood trauma demonstrated a greater tendency to dissociate during gambling.

Similarly, Table 12 shows that there was a significant difference in dissociation in general ($X^2 = 8.52$, $p < .01$) between those who reported childhood trauma and dissociation versus those that did not. Comparison of observed and expected frequencies once again suggests that participants who reported dissociation during childhood trauma demonstrated a greater tendency to dissociate in general aspects of their lives.

Table 12

Chi-square Test of Independence Contingency Tables
B. Dissociation During Childhood Trauma and Dissociation in General

		Dissociation During Childhood Trauma		
		Yes	No	Total
Dissociation In General	Yes	Obs. 26 Exp. 19.8	Obs. 34 Exp. 40.2	60
	No	Obs. 4 Exp. 10.2	Obs. 27 Exp. 20.8	31
	Total	30	61	91

$X^2 = 8.52$, $p < .01$
Obs.= observed (actual) frequencies of participants in each cell
Exp.= expected frequencies for each cell (according to the X^2 statistical model)

Hypothesis 5

One of the primary goals of this study was to attempt to identify a model or set of factors/variables that could predict problem gambling severity in older adults. It was hypothesized that the combination of depressive symptomatology, perceived stress, health difficulties, and negative coping strategies would achieve this goal: that these four factors would account for a large, significant portion of the variance found in gambling severity scores on the CPGI.

To test this hypothesis, preliminary analyses involved an initial examination of the differences between the NLG and MPG groups. These results can be found in Table 6 and a review of the findings are highlighted in the results for Hypothesis 1. To summarize, significant differences were found between the two groups for all independent variables with the exception of Casocdiv, a subscale of the negative

avoidance-oriented coping strategy.

Bivariate correlational analyses investigated the relationships within groups across all independent variables (IVS), and between all IVS and the dependent variable (DV) (CPGI). Correlations for the entire sample are found in Table 13.

Table 13

Bivariate Correlations Between the Independent and Dependent Variables: Full Sample (n=91)

Variable	CPGI	SGC	MedTot	PSS	Ctask	Cemot	Cavoid	GDS
CPGI	1.00	.86***	.51***	.60***	-.30**	.66***	.22	.62***
SGC		1.00	.54***	.62***	-.28**	.61***	.27**	.60***
MedTot			1.00	.77***	-.47***	.64***	.12	.75***
PSS				1.00	-.51***	.70***	.12	.80***
Ctask					1.00	-.31**	.21	-.54***
Cemot						1.00	.32**	.68***
Cavoid							1.00	.12
GDS								1.00

*p<.05, **p<.01, ***p<.001

As previously reviewed, SGC and CPGI were very highly positively correlated, with the highest correlational coefficient (r=.86, p<.001) of all variable combinations. All IVS except Cavoid demonstrated significant correlations with the CPGI, with Cemot and GDS having the strongest relationship (r=.66, p<.001 and r=.62, p<.001 respectively). MedTot and PSS also correlated at the p<.001 level with CPGI. With the exception of the positive coping strategy Ctask, all

correlations with the CPGI were positive in direction indicating that an increase in scores on any of the measures was related to increased scores on the CPGI. Conversely, higher levels of task-oriented coping (Ctask) tended to result in lower levels of gambling severity. Ctask was in fact significantly negatively correlated with all variables except Cavoid.

It is important to note that virtually all of the IVS were significantly correlated with each other indicating considerable collinearity among the variables. In other words, an increase in scores on one variable appears to result in an increase in scores on the other variables as well.

Relationships between the IVS and DV were also examined for the two gambling severity samples, NLG and MPG, and are exhibited in Table 14. Similar to the full sample, Cemot and GDS demonstrated the strongest correlations with the CPGI ($r=69$, $p<.001$, and $r=.61$, $p<.001$) for the MPG group. PSS once again was significantly correlated to the CPGI ($r=.60$, $p<.001$) where as, unlike the full sample, MedTot did not display a significant relationship with CPGI. Cemot and GDS also had the highest correlations with CPGI for the NLG group, although neither were significant. The lack of significant correlations between the IVS and the CPGI for the NLG group is primarily due to the fact that the range of the CPGI was so small (0-2). Once again, very high collinearity was found among the IVS for both groups.

The final step in this analysis was to attempt to identify a model of independent variables that best predict the DV, problem gambling severity scores as measured by the CPGI. A logistic multiple regression analysis was selected as a

Table 14

Bivariate Correlations Between the Independent and Dependent Variables: Moderate-Risk to Probable Pathological Sample (MPG - CPGI > 2) (n=28)

Variable	CPGI	SGC	MedTot	PSS	Ctask	Cemot	Cavoid	GDS
CPGI	1.00	.74***	.33	.60***	-.44**	.69***	-.19	.61***
SGC		1.00	.40*	.69***	-.48**	.64***	-.10	.62***
MedTot			1.00	.63***	-.67***	.54**	.01	.68***
PSS				1.00	-.75***	.71***	-.23	.84***
Ctask					1.00	-.31**	.21	-.54***
Cemot						1.00	-.08	.70***
Cavoid							1.00	-.06
GDS								1.00

Low to No-Risk Sample (NLG - CPGI = 0-2) (n=63)

Variable	CPGI	SGC	MedTot	PSS	Ctask	Cemot	Cavoid	GDS
CPGI	1.00	.58***	.15	.13	.09	.17	.23	.16
SGC		1.00	.17	.23	.05	.09	.15	.12
MedTot			1.00	.74***	-.32*	.45***	-.05	.68***
PSS				1.00	-.36**	.52***	.04	.66***
Ctask					1.00	-.09	.34*	-.38**
Cemot						1.00	.32*	.46***
Cavoid							1.00	-.03
GDS								1.00

*p<.05, **p<.01, ***p<.001

model predictor for this study as it does not assume a linear relation between the IVS and the DV and does not require the variables to be normally distributed. The results of a regression analysis is an equation that represents the best prediction of DV from several continuous or dichotomous IVS. The equation takes the form of:

$Y = A + B_1X_1 + B_2X_2 + ...B_nX_n$ where:

Y = the predicted value based on the full equation,

A = the value of Y if all X values were zero,

X = the various IVS,

B = the coefficients assigned to each of the IVS during regression.

Standard, or simultaneous, multiple regression was chosen for the initial regression analysis. In standard regression, all IVS are entered into the equation at once. Each is assessed as if it had entered the regression after all other IVS had been entered. Therefore, each IV is evaluated in terms of what it adds to prediction of the DV that is different from the predictability of all of the other IVS. To satisfy power requirements, a minimum of ten cases (individuals) per IV is recommended. (Tabachnick & Fidell, 1989). The greater the ratio of cases to IV, the higher the power of the results.

To interpret the results of the regression analysis, several factors are examined. The overall predictability of the model, or the proportion of variance in the DV that is predictable from the best combination of the entered IVS, is indicated by R Square. R Square tends to optimistically estimate how well the model fits the population. Adjusted (Adj.) R Square attempts to correct R Square to more closely reflect the goodness of fit of the model in the population. The F

statistic and corresponding significance level of F indicate whether or not the predictability of the model (Adj. R Square) is significantly different from zero.

In the Coefficients table, the "constant" is the expected score of the DV if everything else entered into the equation was zero. "B" is the expected degree of change in the raw score of the DV given a raw score change of one in the associated IV. Beta is B standardized: if the raw data was transformed to z scores, B would be the same as Beta. One standard deviation change in the IV would result in an expected Beta standard deviation change in the DV. The t-tests and significant levels indicate whether or not the contribution of a given IV significantly predicts a change in the DV.

Independent variables were selected based on the relative strengths of their correlations with the CPGI. Cemot, GDS, MedTot, and PSS were entered into the regression analysis. Cavoid, it's two subscales, and Ctask were not included due to their relatively weak correlations with CPGI. Of note, the SGC and Impgamb measures were also not considered for the regression analysis. This decision was based on the fact that these measures address criteria which is inherent in the CPGI as well as in most measures of problem gambling severity. Results from the regression analysis are displayed in Table 15.

The overall model was found to significantly predict changes in CPGI scores; R Square = .494, $F(4,85) = 20.78$, $p<.001$. The model was able to predict 70.3% of the CPGI scores. The R square of .494 essentially accounts for 49.4% of the variance found in the CPGI. The fact that over 50% of the variance is not accounted for, combined with the highly significant constant, suggests that another

Table 15

Regression Analysis (Model = Enter) of the Independent Variables (GDS, Medtot, PSS, and Cemot) on the CPGI: Full Sample (n=91)

Model Summary

Model	R	R Square	Adj.R Square	Std. Error
1	.703	.494	.471	3.08

ANOVA

Model 1	SS	df	Mean Square	F	Sign.
Regression	788.78	4	197.20	20.78	p<.001
Residual	806.51	85	9.49		
Total	1595.29	89			

Coefficients

Model 1	B	Std. Error	Beta	t	Sign.
Constant	-5.437	1.57	----	-3.46	.001***
GDS	.175	.088	.279	1.99	.049*
MedTot	------	------	-.064	-.481	.632
PSS	------	------	.135	.909	.366
Cemot	.141	.037	.414	3.63	.000***

*p<.05, ***p<.001

factor, or factors, may be playing a significant role in predicting the CPGI.

The only variables to achieve significance were Cemot (t=3.63, p<.001) and GDS (t=1.99, p<.05). The lack of significance for both PSS and MedTot may have been due to the high collinearity found across all the IVS. To investigate this, the partial correlations, squared semi-partial correlations, tolerance levels and variance inflation factors (VIFs) of the IVS were examined.

Partial correlations (r) are the *correlations* of each IV with the DV in the model after removing the effects of variables already entered into the model. The contributions of the other IVS are taken out of both the IV and the DV. Squared semi-partial correlations (sr^2) are a measure of the *unique contribution* of the IV

(after accounting for collinearity with other IVS) to R Square for the model. With sr^2, the contribution of other IVS is taken out of only the IV. Tolerance levels are a statistic used to determine how much the IVS are linearly related to each other. It is the proportion of an IV's variance not accounted for by other IVS in the model. Very low tolerance indicates that the IV contributes little to the regression model. Variance inflation factors (VIFs) are the reciprocal of the tolerance levels. As the VIF increases, so does the variance of the regression coefficient making it an unstable estimate. The larger the VIF, the greater the multicollinearity of the IV with other IVS in the model. Tolerance, VIF, r, and sr^2 are for the IVS are displayed in Table 16.

Table 16

Partial Correlations (r), Squared Semi-Partial Correlations (sr^2), Tolerance and VIF for Cemot, GDS, PSS, and MedTot

Variable	Tolerance	VIF	r	sr^2
Cemot	.457	2.19	.366	.280
GDS	.304	3.29	.211	.154
PSS	.269	3.71	.098	.070
Medtot	.340	2.93	-.052	-.037

The tolerance levels and VIF for the GDS, PSS, and MedTot indicate a high degree of collinearity between the variables. Despite having the highest VIF and lowest tolerance, PSS still contributed .07 to the overall R Square of the model suggesting a meaningful contribution. MedTot in contrast had a relatively low VIF yet still resulted in little variance in R Square. Despite a relatively high correlation with the CPGI, MedTot had little predictive value of change in CPGI scores. Overall findings of the regression analyses reveal that Cemot and GDS

account for a significant proportion of variance found in CPGI scores, with PSS having a moderate effect despite high collinearity with the other variables.

Hypothesis 6

The amount of variance not accounted for in the previous regression model suggests that another factor may be contributing to the predictability of scores on the CPGI. It was hypothesized prior to the study that the presence or absence of childhood trauma (CHT and NCHT) would moderate the effects of GDS, PSS, MedTot, and coping strategy (Cemot) on CPGI scores. Given the findings of the previous regression, it is foreseeable that the interaction effects CHT/NCHT has on the IVS may result in an overall increase in predictability of the model. Table 10 displays the descriptive statistics for the group that reported childhood trauma (CHT) and the group that did not (NCHT). Bivariate correlations for the two groups (CHT & NCHT) were also examined and can be found in Table 17. Inspection of the table reveals that with the exception of Cavoid, correlations between the CPGI and IVS were higher and demonstrated a greater level of significance (despite a smaller sample size) for the CHT group than the NCHT group. Once again, very high correlations between IVS are apparent for both groups suggesting a high degree of collinearity.

In order to investigate the interactions between the IVS and the presence or absence of childhood trauma, the IVS were multiplied by either 1 (CHT) or 0 (NCHT). Manipulation of the variables in this manner is widely accepted as the most statistically sound method of examining the effects of a dichotomous variable on continuous variables in a regression equation (Pedhazur, 1982). The resulting

Table 17

Bivariate Correlations Between the Independent and Dependent Variables

A. Positive Report of Neglect, Abuse, or Abandonment Sample (CHT) (n=35)

Variable	CPGI	SGC	MedTot	PSS	Ctask	Cemot	Cavoid	GDS
CPGI	1.00	.87***	.53***	.65***	-.54***	.75***	.07	.65***
SGC		1.00	.61***	.72***	-.66***	.70***	.03	.68***
MedTot			1.00	.83***	-.71***	.66***	-.10	.77***
PSS				1.00	-.71***	.80***	-.10	.80***
Ctask					1.00	-.49**	.20	-.72***
Cemot						1.00	.10	.74***
Cavoid							1.00	-.04
GDS								1.00

B. Negative Report of Neglect, Abuse, or Abandonment Sample (NCHT) (n=56)

Variable	CPGI	SGC	MedTot	PSS	Ctask	Cemot	Cavoid	GDS
CPGI	1.00	.78***	.29*	.24	.11	.42**	.43**	.27*
SGC		1.00	.28*	.29*	.17	.36**	.47**	.25
MedTot			1.00	.64***	-.26	.52***	.21	.65***
PSS				1.00	-.32*	.50***	.22	.71***
Ctask					1.00	-.11	.26	-.38**
Cemot						1.00	.45**	.52***
Cavoid							1.00	.18
GDS								1.00

*p<.05, **p<.01, ***p<.001

variables when entered into the regression equation indicate the degree of variance accounted for by the interaction of the moderator (CHT/NCHT) with the original IV.

A standard logistic regression was again employed for this analysis. VIF, tolerance, partial correlations and squared semi-partial correlations were also examined during the regression analysis. Results are displayed in Table 18. The overall predictive ability of the model improved considerably over the first regression with R Square = .610, $F(8, 81) = 15.84$, $p<.001$ and the model predicting 78.1% of the CPGI scores. The constant value is still relatively high with a B value -4.06 ($p<.01$). GDS was no longer found to be a significant variable in the equation which is not surprising given it's high collinearity with all other variables, especially the interaction variable GDS-CH. GDS-CH ($t= 1.92$, $p<.05$) and Cemot ($t=2.46$, $p<.05$) were the only variables to significantly contribute to the model. An examination of the semi-partial correlations revealed that PSS (.063) and the interaction between Cemot and CHT (.133) also contributed considerably to the overall model. Very high tolerances were once again observed for all IVS emphasizing the very high relationships between all of the variables. Overall findings suggest that the presence or absence of childhood trauma played a significant moderating role in the predictability of the IVS and on the DV. Negative emotion-oriented coping and depression combined with childhood trauma account for a significant proportion of the variance among CPGI scores, with perceived stress and depression independent of childhood trauma also displaying a moderate effect.

Table 18

Regression Analysis (Model = Enter) of the Independent Variables (GDS, MedTot, PSS, and Cemot) and Interaction Effects (GDS-CH, MedTot-CH, PSS-CH, and Cemot-CH) on the CPGI: Full Sample (n=91)

Model Summary

Model	R	R Square	Adj.R Square	Std. Error
1	.781	.610	.572	2.77

ANOVA

Model 1	SS	df	Mean Square	F	Sign.
Regression	973.20	8	121.65	15.84	p<.001
Residual	622.09	81	7.68		
Total	1595.29	89			

Coefficients

Model 1	B	Std. Error	Beta	t	Sign.
Constant	-4.059	1.45	----	-2.79	.007**
GDS	-------	------.	.094	0.50	.617
MedTot	-------	------	-.045	-.188	.851
PSS	-------	------	.140	.909	.366
Cemot	.101	.041	.297	2.46	.016*
GDS-CH	.285	.148	.464	1.92	.048*
MedTot-CH	-------	------	-.045	-.188	.851
PSS-CH	-.124	.131	-.406	-.950	.345
Cemot-CH	-------	------	.524	1.42	.159

*p<.05, ***p<.001

Partial Correlations (r), Squared Semi-Partial Correlations (sr^2), Tolerance and VIF for Cemot, GDS, PSS, MedTot, and CH Interaction Variables

Variable	Tolerance	VIF	r	sr^2
Cemot	.332	3.01	.264	.171
GDS	.137	7.30	-.056	-.035
PSS	.202	4.95	.100	.063
MedTot	.084	11.92	.001	.001
Cemot-CH	.036	28.13	.156	.099
GDS-CH	.082	12.12	.209	.133
PSS-CH	.026	37.91	-.105	-.066
MedTot-CH	.084	11.91	-.021	-.013

Post-Hoc Analyses

As reviewed in Hypothesis 2, dissociation during gambling (Dissgam) and dissociation in general (Dissgen) were highly correlated with the CPGI. Given the relatively high constant value still present in the regression equation, it was decided post-hoc to examine the predictive ability of Dissgam and Dissgen on the CPGI by adding it to the regression equation. The function in doing this is still to try and find the best overall model or fit of the variables in this study to predict problem gambling severity.

It was decided that a backward, stepwise regression was the most applicable statistical procedure for the post-hoc analysis. In a backward stepwise regression, the equation starts out with all variables entered in the equation (similar to the enter method employed in the previous two regressions). IVS are dropped one at a time if they do not meet statistical significance. This process results in an increase in significance for variables that remain in the equation, especially with IVS that are highly multi collinear. Stepwise regressions are considered model-building rather than model-testing procedures. In such, they are the most appropriate regression for analysing post-hoc comparisons. Stepwise regressions are also considered indispensable at identifying multi collinear variables (Tabachnick & Fidell, 1989).

In total five models were produced by the analysis. A very good model fit was generated at the fifth and final step. PSS, MedTot-CH, MedTot, and Dissgen were respectively dropped at each step for lack of significant effect ($p<.10$) on the overall model. The overall change in R Square for the model following the

exclusion of the four IVS was .005 indicating that the combination of excluded variables resulted in very little change in the CPGI scores. The final results of the backwards stepwise regression can be viewed in Table 19. Statistics for the excluded variables are also listed.

The overall model showed a very large increase over the previous regression analyses in the ability to predict problem gambling severity, predicting 91.3% of CPGI scores. The total variance (R Square) of the CPGI accounted for by the set of IVS was .833, $F(6,83)= 69.04$, $p<.001$. The increase is due primarily to the addition of Dissgam to the regression equation. Dissgam resulted in an unique contribution of .477 (sr^2) as well as altering the contribution of the other variables.

The contributions of Dissgam, Cemot, GDS, GDS-CH, PSS-CH were all significant to at least the .05 probability level. Cemot-CH also exhibited a relatively individual effect on the variance (.08) although not at a significant level ($p>.05$). Findings suggest that the combination of Dissgam, Cemot, GDS, and the interaction effects of CHT with GDS, PSS, and Cemot provide a model that very accurately predicts gambling severity as measured by the CPGI.

Qualitative Analysis

Although the qualitative analysis was primarily exploratory in nature, there were pre-hoc expectations as to what would be found. It was speculated that depressive symptomatology, especially sadness, loneliness, and boredom, negative life-events and associated changes in daily stress and social activity, and difficulties with health would occur prior to the *onset* of problem gambling patterns of

Table 19

Backward Stepwise Regression Analysis of the Independent Variables (GDS, MedTot, PSS, and Cemot), Interaction Effects (GDS-CH, MedTot-CH, PSS-CH, and Cemot-CH) Dissgam and Dissgen on the CPGI: Full Sample (n=91)

Model Summary

Model	R	R Square	Adj.R Square	Std. Error
5	.913	.833	.821	1.79

ANOVA

Model 1	SS	df	Mean Square	F	Sign.
Regression	1328.98	6	221.50	69.04	p<.001
Residual	266.30	83	3.20		
Total	1595.29	89			

	Coefficients			Collinearity			
Model 1	Beta	t	Sign.	r	sr^2	Toll.	VIF
Constant = -2.26		-2.98	.004*	----------			
Cemot	.239	3.49	.001*	.358	.156	.429	2.33
GDS	-.397	-3.93	.000***	-.396	-.176	.197	5.07
Dissgam	.677	10.63	.000***	.759	.477	.496	2.02
PSS-CH	-.434	-2.04	.044*	-.219	-.092	.045	22.46
Cemot-CH	.372	1.78	.078	.192	.080	.046	21.63
GDS-CH	.550	4.27	.000***	.424	.191	.121	8.64
Excluded							
PSS	-.054	-.129	.897	-----	-.014	.212	4.71
MedTot-CH	-.009	-.073	.942	-----	-.008	.129	7.78
MedTot	.098	1.30	.198	-----	.142	.347	2.88
Dissgen	-.081	-1.46	.149	-----	-.159	.644	1.55

*p<.05, ***p<.001

behaviour. In addition, these factors were theorized as possible contributors to the *maintenance* of problem gambling behaviour.

Qualitative Analysis

The reason for adding a semi-structured interview (Appendix F) to the questionnaires was to allow individuals the opportunity to express their opinions about their personal difficulties with gambling using their own words. The

interview addresses several factors potentially involved in the onset and/or maintenance of problem gambling behaviour. The use of the interview is advantageous in that it allows individuals an open forum to address what they feel were/are the salient factors that contribute to their difficulties with gambling. By using an interview, individuals are not constrained by the limited choices offered in typical questionnaires. One of the goals was to examine what individuals feel were/are triggers for them that led to the onset of problem gambling behaviour. Another area of investigation was the possible relationship between problem gambling behaviours with other addictive behaviours, as well as familial factors (i.e. the presence or absence of addictive behaviours, including gambling, in immediate family members).

Only individuals who scored in the moderate-risk to problem-gambling range, and had gambled in the past 12 months, were asked if they were willing to participate in the interview. Sixteen (out of a possible 28) individuals, 12 women and 4 men, who met the criteria agreed and answered all questions asked by the interviewer. Descriptive statistics and correlations for the interviewed sample are found in Tables 20 and 21 respectively. Data from the interviewees was listed with data for the MPGs who were not interviewed to allow for a cursory comparison of the differences between the groups.

The lack of a significant correlation between the CPGI and several of the independent variables (including MedTot and PSS) is largely attributable to the small sample size. Overall correlations for the interviewed participants are similar to those found for the MPG sample with Cemot and GDS having the strongest

Table 20
Descriptive Statistics for the Moderate-to-Problem Gamblers (Not Interviewed) and Participants Who Completed the Interviews

Measure	MPGs (n=12)			Interview Participants (n=16)		
	Mean	SD	Range	Mean	SD	Range
CPGI	5.91	4.0	3-13	9.00	4.5	3-17
SGC	25.08	10.8	13-44	32.44	10.0	16-52
MedTot	14.75	8.2	1-25	14.75	7.6	2-27
PSS	25.41	6.6	16-38	29.89	7.3	17-39
GDS	9.50	7.1	0-24	12.88	8.4	0-28
Ctask	48.91	8.6	31-60	46.75	8.8	31-62
Cemot	49.17	9.6	26-64	49.69	14.1	30-75
Cavoid	51.00	5.4	40-57	47.12	9.9	25-65
Cadis	24.50	2.5	21-29	23.34	5.8	12-34
Casocdiv	18.00	3.0	11-22	16.00	4.0	7-24
Dissgamb	1.67	1.3	0-4	2.56	1.3	1-5
Dissgen	1.25	1.1	0-4	1.88	1.5	0-5
Impgamb	1.16	1.1	0-3	1.75	1.1	0-3

Table 21

Bivariate Correlations Between Independent and Dependent Variables: Participants Who Completed the Interviews (n=16)

Variable	CPGI	SGC	MedTot	PSS	Ctask	Cemot	Cavoid	GDS
CPGI	1.00	.65**	.46	.49	-.25	.73**	-.03	.51*
SGC		1.00	.47	.57*	-.30	.64**	.09	.54*
MedTot			1.00	.74**	-.78***	.54*	.05	.85***
PSS				1.00	-.70**	.72**	-.10	.84***
Ctask					1.00	-.42	.08	-.71**
Cemot						1.00	-.02	.74***
Cavoid							1.00	.03
GDS								1.00

*p<.05, **p<.01, ***p<.001

relationship with scores on the CPGI. The similarity between the two samples, on descriptive statistics and correlation analysis, suggests that the interviewed sample is representative of the moderate-risk to problem gamblers investigated in this study.

The primary goals of the interview were to better understand what led these individuals to start gambling, to identify possible precursors to problem gambling behaviour, and to attempt to understand what it was about their gambling experience that made it so difficult to stop.

According to Smith, Harre, & Van Langenhove (1995) there are five main approaches to analysing qualitative data collected in an interview format: meaning condensation, meaning categorization, narrative structuring, interpretation, and ad hoc methods. Ad hoc methods are generally the most frequently used forms of interview analysis. They consist of a combination or interplay of the previous four techniques listed and are advantageous in that they facilitate connections and structures significant to the goals of the study. A variety of pragmatic approaches to the interview text, as well as textual or quantitative methods, can be used to bring out meanings. The outcome can be in words, numbers, or combinations of both. The qualitative analysis of this study is ad hoc in nature and includes meaning condensation and meaning categorization of collected data. Meaning condensation entails an abridgement of the meaning expressed by the participants into shorter formulations. Long statements are compressed into brief statements in which the main sense of what is said becomes the focus thus reducing large texts into briefer, more succinct information (Miles & Huberman, 1994). In meaning

categorization, long statements are reduced to simple categories that are being investigated, thereby often allowing investigation of a hypothesis. Categorization structures the interviews and gives an overview of responses obtained across interviews. In so doing, it allows for quantification of responses and an examination of how typical, or different, responses may be across participants.

Miles and Huberman (1994) list 13 different types of ad hoc tactics that may be used individually or in combination to generate meaning in qualitative data. Three of these tactics, which may be considered types of condensation or categorization are employed in this study: Noting patterns and themes within and across data sets (interviews), clustering of information (generally across interviews) and making contrasts and comparisons that sharpen understanding and allow for differentiation. Given the goals of this study, it was decided that the most feasible way to review the participants' responses was on a question-by-question basis, as opposed to examining their interviews as a whole. Evaluating the interviews in this manner permitted an examination of themes and patterns across individuals without detracting from the individuality and robustness of the responses or the general themes found for each participant (Lincoln & Guba, 1985). It also provided collaborative information to the quantitative data received from the entire sample. Participants' responses to the semi-structured interview can be found in Appendix N. Common themes and differences found among individuals were addressed on a question-by-question basis in the following paragraphs. Questions where individuals tended to significantly overlap in their responses were reviewed together.

Question 1: When did you start to gamble regularly? If applicable, how long after was it that you realized that you have a problem with gambling? What lead you to this realization?

The majority of respondents indicated one of two reasons for beginning to gamble on a regular basis: the opening of the casino in Windsor and/or the loss of a loved one. Eight of the 16 said that they started gambling on a regular basis shortly after the opening of Casino Windsor and six pointed out that it was shortly after they lost someone they cared about (either through break-ups or deaths). For many it was about 3-5 years before they started to realize that they may have developed a problem with gambling. Such a latency has been reported in several prevalence studies suggesting the presence of an "incubation period" following the initial opening of a casino. For this sample, the eventual realization that they had developed a gambling problem tended to be brought on by increasing debts that they were unable to pay and by family members or friends expressing their concern. One participant stated that she "had a feeling that she needed to go - that she was addicted". Despite scores in the moderate-risk to problem gambling range (on the CPGI), four of the 16 people interviewed still feel that they do not have a problem with gambling.

Questions 2 & 3: What in your opinion initiated your first gambling experience? Was there something about gambling that you found compelling, or attractive, or pleasurable? If so, in your own words, what was it?

Most respondents initially started gambling out of curiosity or with friends. For many it was also a social activity that they felt may relieve some of their

loneliness and boredom. Several respondents said that they initially believed they would win money while gambling, and that gambling was exciting at first although the thrill did not last.

The predominant reason that people found gambling compelling, and subsequently continued, was that it served as a "distraction" or an "escape" from unpleasant aspects of their lives, such as being alone and feeling depressed over life changes and relationship losses. Others reported that they felt important and/or accepted, or felt "alive" which was a change from their ordinary lives. Somewhat unexpectedly, two participants indicated that they relished the sense of "control" and "power" that they experienced while gambling. They related this experience to their general lives in which they tended to feel a lack of control or power and the emotions they experienced while gambling was a positive change, and escape for them. Overall, it appears that most of the participants began gambling our of curiosity, for fun and excitement. Once the initial thrill and exhilaration started to wane, the sense of escape and distraction, of feeling different than they normally would, seemed to drive their urge to continue gambling. The general theme is exemplified by comments from two of the participants: "...gambling really became a stress reliever, a way to escape...the first time I went I got what I was looking for", and "initially it was very exciting...lots of people, bright lights, the whole package...it then became a distraction...I could leave my crappy world behind and not have to worry or think about things, or even remember that I was sad".

Questions 4 & 5: Why do you gamble now? If you don't, why not? What, if anything, does/did gambling "do for you"?

For those participants that still gamble (a few of those interviewed are now in, or have completed treatment, and no longer gamble at all, or at least as much as they used to) the reasons for continuing are similar to the reasons that they initially became addicted. The sense of escape and feeling different than they normally would seems to be the driving force behind continued gambling, despite the corresponding problems that a lot of the participants have experienced as a result of the their gambling. Excitement and stimulation are also dominant reasons that they continue to gamble.

Feeling "alive" and in control appear to be considerable changes from their normal experience for some of the participants. The perception of control, or power, is reported primarily by individuals who believe that they no longer have problems gambling: that they can gamble now without losing command over their behaviour. As might be expected, many of the respondents feel very little control in their daily lives, especially those who have gone through life-changing events such as having to retire, losing loved ones, or being forced to leave their homes for financial reasons. Admittedly, the idea of feeling in control of an activity in which you really have no control over the outcome (gambling) may seem somewhat strange. However, it appears that the independence of the behaviour, of being the one to decide whether or not to gamble, how much to wager, when to go, and so on, provides the individuals with a sense of mastery over their lives which they find rewarding. The following quote may best summarize this idea: "[gambling] is an escape of sorts...I am in a totally different world...one where I am in control...I know I have no control over the game itself but...I really do feel like I am in

control of what is going on...in control of what I am doing. There aren't many times anymore when I feel like that".

Question 6: Prior to your first time gambling, did you suffer a significant loss in your life? Do you feel that this may have contributed to your eventual need to gamble more?

As previously mentioned, the majority of the participants acknowledged a significant loss in their lives prior to developing problem gambling behaviour. Nine of the 16 people interviewed reported losing a partner, either because of death or separation, prior to starting to gamble regularly. Others noted that they "lost" significant parts of their lives, such as retirement, children leaving the home, and marriages splitting apart. For many, the losses resulted in significant changes in their social lives as well as feelings of being all alone, very unhappy, empty and no longer independent. These negative life-events tended to change not only their physical living situation, but also how they saw themselves, and what their roles were. The distraction and escape they experienced when gambling helped fill the void, or the emptiness, they experienced as a result of the losses. "Gambling made me numb...", "...gambling gave me a sense of being", "gambling...helped take away the emptiness" and "gambling filled that void" are all quotes from participants that exemplify the function that gambling came to serve for people following losses in their lives.

Questions 7 & 8: Prior to your first time gambling, did you experience a decline in social circumstance? Do you feel that this may have contributed to your need to gamble more? Have you noticed a change in how socially active

you are now? If so, what do you think triggered this change?

Fifteen of the 16 people interviewed reported that they experienced a change in their social activity prior to becoming heavily involved with gambling. For almost all of them, the change was directly associated with a loss they experienced, primarily loss of a partner or retirement. Several people reported that when they lost their partner and/or retired they also lost contact with a lot of their friends. A few specifically stated that if they had not experienced such a change in their social lives, they believe they would not have developed gambling problems.

Since their decline in social circumstance, gambling has become the primary social activity for the majority (13 out of 16) of those interviewed. Outside of gambling, most reported that they have virtually no social network or contact with friends they had prior to starting to gamble. Two individuals stated that they don't have time to be go out with friends anymore because "gambling keeps me pretty busy". In contrast, some actually feel that they are *more* socially active now although their activity is almost exclusively centered around gambling. In spite of the difficulties that gambling has caused them, the general theme among participants was that gambling has given them something social to do, and that effect is one of the primary draws for them: "if it weren't for bingo, I wouldn't be [active]...", "Bingo is the only social thing I do".

Question 9: Prior to your first time gambling, were you experiencing any health or physical problems? Do you feel that this may have contributed to your need to gamble?

While nine individuals reported some type of health problems, only four of

the 16 people interviewed reported that difficulties with health may have contributed to their gambling. Of the four, three reported mental health problems. For one individual in particular, her deterioration in health seemed to have a significant effect on her gambling: "...depression, stress, which made my pain even worse....probably made me gamble more because gambling kind of took me away from that...I really did not notice much while I was gambling". With one or two exceptions, overall it appears that with this group of individuals at least, difficulties with health were not a contributing factor to their gambling.

Question 10: Do you think the fact that you live in an area where gambling is widely accessible, and accepted, influenced your gambling behaviour and subsequent problems?

All 16 people who were interviewed agreed that living in a city that has easy access to not only a casino, but also to a race-track and a plethora of bingo halls, influenced their gambling behaviour. Further, seven of the 16 believe that if there had not been a casino in the city they would never have developed a problem with gambling. While the opinions are obviously subjective and possibly biased against organized gambling establishments, the fact that every person interviewed agreed suggests that proximity to highly advertised and easily accessible gambling establishments increases the likelihood of people gambling and people developing problem gambling behavioural patterns.

Question 11 &12: Has anyone in your family ever experienced difficulties with gambling, drinking, or substance abuse? Have you ever felt that you had a problem with alcohol or drug-use (including pain medication)?

Twelve out of 16 (75%) reported a familial history (genetic first order relative including parents, grandparents, siblings, aunts and uncles) of either drug, alcohol, or gambling problems, with the latter accounting for the majority. In contrast, Table 4 shows that 21.7 % of the entire sample reported a familial history of problem gambling while 39.8% reported alcohol or drug problems in their immediate families. None of those interviewed reported any past or present difficulties with alcohol or drug-use. Similarly, only 8.4% (Table 4) of the entire sample reported any personal difficulties with alcohol or drugs. Very little additional information was volunteered by the interview participants.

Question 13: Do you ever feel lonely and/or bored? If so, what do you do to cope with these feelings?

Fourteen out of 16 stated that they presently feel lonely and/or bored. For many, one of the reasons that they continue to gamble is because it helps alleviate their loneliness. Distraction, through gambling, has become one of their primary means of coping with isolation and a lack of social or interpersonal contact. Similar to the responses for Questions 7 and 8 regarding changes in social circumstances, a surprising number of those interviewed view their gambling in a positive manner (despite the repercussions several have experienced because of their gambling behaviour) in that it is the main activity that they have where they *do not* feel lonely, bored, or sad. One lady in particular summed up a common theme: "I often feel lonely - that is another reason for gambling. For women especially, it is a place you can go and feel safe...it allows you to be still socially active and to get out of the house".

Question 14: Do you feel that complete abstinence is necessary to successfully recover from a gambling problem? Can a problem pathological gambler control their gambling in your opinion? If so, why? If not, why not?

Responses to this question were completely mixed across participants, with several having relatively strong feelings on the subject, and others having no opinion at all. To "recover" from problem gambling, five participants felt that complete abstinence was necessary, four believed that they could control their gambling, and seven did not know or did not have an opinion. Those who felt that abstinence was necessary tended to speak from their own personal experience: "If I start again, I will be absolutely hooked", "I will have to stop cold turkey. It just sucks me in", and "Once I start gambling it is really hard to limit or stop until I run out of money". Those who believed that control was possible were generally not as adamant in their opinion, with comments like "I may just be trying to convince myself so I don't have to quit" and "I think I can control it but I would need to find another outlet or activity to keep me busy". The variety of opinions and beliefs expressed by the participants is not surprising especially given the heated debate over abstinence versus control for the treatment of problem gambling in current research. This issue will be addressed further in the discussion section.

CHAPTER 4

Discussion

The present study empirically investigated the relationship between problem gambling severity in older persons and a number of psychological and social factors. Specifically, the associations between depression, perceived stress, positive and negative coping strategies, physical difficulties, and childhood trauma with gambling were analytically examined. The foundation of this study was primarily hypothesis driven and based on well-established theoretical models, in particular Jacobs' General Theory of Addictions. The relative lack of research in the literature on the gambling behaviour and pathology of older adults however required an additional exploratory approach which was facilitated by the use of qualitative analysis.

The discussion will be presented in 4 general sections: 1) general findings regarding gambling and related behaviour of older persons, 2) implications of the relationship between problem gambling and lack of control 3) an examination of the predictive ability of the statistical model identified in this study including a review of the individual variables, and 4) review of results with respect to Jacobs' General Model of Addictions. Limitations of this study and directions for future research will be reviewed throughout the discussion.

General Findings

Overall, 93.4% of participants reported having been to a casino at least once in their lives. Although relatively high, this percentage is not that surprising given that the sample was drawn from cities with casinos: proximity and

accessibility to casinos have been shown to increase overall prevalence estimates of gambling with rates generally in the high 80s to low 90s percentiles (Emerson, Laundergan, & Schaefer, 1994; Winters, Bengston, Dorr, & Stinchfield, 1998). Purchasing lottery tickets was also very common with 95% of the sample having done so in the past year, and 44.8% stating that they do so on a weekly basis. In terms of interactive gambling, bingo was the most common game with 64.8% of participants having played in the past year, and over a fifth currently playing on weekly basis (20.3%). Casino slot machines was the favourite gambling activity for 61.5% of the sample. These findings are similar to previous studies suggesting that bingo, lottery and casino gambling are the most common gambling activities for older persons (McNeilly & Burke, 2001; Thomas, 1996).

In terms of problem gambling rates in older adults, little research has been conducted, and reported findings have varied considerably from study to study. In a random phone survey, Hirsch (2000) found that 1.4% of 800 individuals age 65 and over were probably pathological gamblers. The Citizen Advocacy Society of Lethbridge, Alberta (1995) reported a much higher estimate with 10.9% of 129 individuals over 65 scoring in the problem gambling range. The sample in this paper reported very high levels of both moderate-to-high risk gamblers (16.5%) and problem gamblers (14.3%): almost one-third (30.8%) of the sample indicated concerning levels of problem gambling behaviour. However, the problem gambling rates found in this study have to be reviewed with respect to the target population. Recruitment and advertising were aimed directly at individuals who had at some point in their lives gambled *at least* once. Although only four

members of the recruited treatment group actually participated, the advertisements were geared towards individuals who were interested in talking about their gambling behaviour implying a sample that gambled on at least a regular basis. This may at least partially account for the exceptionally high percentage of moderate-to-problem gamblers found in this sample. Finally, this was not a normal random sample in that non-gamblers were excluded from the study.

That said, the overall percentages of moderate-to-high risk gamblers and problem gamblers in this sample was alarmingly high, especially when compared to the pathological gambling average rates of between 1-3% typically found in a normal population (American Psychiatric Association, 1994; Shaffer, Hall, & Vanderbilt, 1997; Volberg & Steadman, 1989). Despite the somewhat biased sample, the high prevalence rates found in this study concur with more recent research which suggests that problem gambling is on the rise (Govoni, Rupcich, & Frisch, 1997; Wiebe, Single, & Falkowski, 2001). This trend combined with the fact that older persons tend to be more vulnerable and often targeted by gambling establishments suggest that the older portion of the population are at high-risk for developing difficulties associated with gambling.

Participants in this study reported a high degree of familial gambling and/or alcohol or drug use which is consistent with the literature (Goetestam & Johansson, 2003; Toneatto, Blitz-Miller, Calderwood, et. al, 1997). Out of 83 individuals, 41% indicated that someone in their immediate family gambled on a regular basis, with 21.7% being problem gamblers. Similarly, 39.8% reported that someone in their family had an alcohol or drug problem. Both familial history of

gambling and alcohol use are well established risk factors for potential problem gambling, especially in adolescents and young adults (Black, Moyer, & Trent, 2003; Winters, Stinchfield, Botzet, & Anderson, 2002). The fact these appear to be common in older gamblers as well suggests that the risk factors are long-lasting and do not diminish with age. Familial history, both gambling and alcohol abuse, is therefore another factor that may be helpful in the early identification and prevention of gambling problems in older adults and needs to be further researched.

In examining the typical behavioural correlates of gambling, this study surprisingly found that the majority of the participants did not report personal difficulties with alcohol and/or drug use. A multitude of research has demonstrated the very high comorbidity between problem gambling and alcohol abuse in the general population (DiClemente, 2003; Black & Moyer, 1998; Orford, Morison, & Somers, 1996; Petry, 2000). Although gambling is not an actual addictive "substance" it results in similar physiological effects such as dissociation and changes in arousal. The high percentage of moderate-to-high risk gamblers and problem gamblers found in this study, compared with the very low percentage (8.4%) of individuals with alcohol or drug problems, seems to go against the literature. One of the reasons for this finding may be the hesitancy of older adults to admit problems with alcohol. Research suggests that alcohol abuse and dependence in older adults is generally underestimated and can be difficult to identify. This is often due to older persons' tendency to deny problems, especially those that they deem to be viewed as weak or socially unacceptable, such as

substance abuse (Menninger, 2002). In addition, many older adults may not realize that they may have an alcohol or drug, specifically medication, dependence problem (Fink, Beck, & Wittrock, 2001). The rise in alcohol use in older adults suggested by the literature and the findings of increased problem gambling in older adults requires much closer empirical examination. Education programs for older adults aimed at preventing problems with gambling and substance-use should be a priority in the academic and clinical realms of psychology.

Problem Gambling, Control, and Addiction

As mentioned in the last section, a large body of literature has found extremely high relationships between gambling and other addictive behaviours. In the past addiction was defined as dependence on a drug as evidenced by cravings, increased tolerance, and withdrawal. Researchers are now moving towards a definition of addiction based more on behaviour and consequences of behaviour, to the extent that they are starting to look at whether brain activity and biochemistry are affected the same way in "behavioural" addictions as they are by substance abuse (Holden, 2001).

One of the central issues of defining addiction is continued engagement in self-destructive behaviour despite adverse consequences. Another core feature is the issue of loss of, or impaired control. Central to the concept of impaired control is being able to resist opportunities to being an "episode" or session of a behaviour and to exercise restraint once the behaviour is engaged in. Research suggests that the two, combined, are strongly indicative of "severe dependence" and are subsequently central to addiction. One of the goals of this study was to

study the relationship between loss of control and gambling severity.

It was hypothesized that loss of control would be highly related to problem gambling severity and that moderate-to-problem gamblers (MPGs) would be more likely than no-to-low risk gamblers (NLGs) to report difficulties with control when it comes to gambling. Results confirmed these hypotheses.

Scores on the Scale of Gambling Choices (SGC) were very highly correlated with reported level of problem gambling severity measured by the Canadian Problem Gambling Index (CPGI), with $r=.859$, $p<.001$. The impulse control features of the DSM-IV (Impgam) were also significantly correlated to both the CPGI and the SGC ($r=.824$ and $r=.731$ respectively, $p<.001$ for both). The decision was made not to include these measures in the regression analyses based on the fact that the issue of control is central to the current diagnostic criteria for pathological (or problem) gambling.

These findings strongly support the research that suggests impaired control is a central factor in problem gambling behaviour. Given the established relationship between impaired control and other addicitive behaviours, the findings are consistent with the notion that gambling should be considered an addictive behaviour, despite the lack of a psychoactive substance.

The conceptualization of gambling as an addiction has implications not only in the academic realm but also in the clinical, especially in terms of treatment. Regarding the issue of abstinence versus control as a requirement for the treatment of problem gambling, the mixed views reported by the interviewed participants are similar to those of debate in psychology literature. Researchers and clinicians are

currently debating whether or not abstinence, similar to the tenets of both Alcoholic's Anonymous and Gambler's Anonymous, is a requirement for the successful cessation of problem gambling behaviour. Although the scope of this study was not to address this issue, the findings do suggest that problem gambling is best conceptualized as an addiction. Research is clearly needed to examine the implications of this on both the diagnosis and treatment of problem gambling.

A Predictive Model of Problem Gambling

One of the primary goals of this paper was to attempt to identify a model of factors that individually and in combination would theoretically predict problem gambling severity. The models will be reviewed first followed by a closer examination of each of the variables studied. Initial regression analyses were run with the primary variables of investigation, depression as measured by the Geriatric Depression Scale (GDS), emotion-focused coping (Cemot), perceived stress (PSS), and difficulties with physical or medical problems (MedTot). Of these variables, GDS and Cemot significantly contributed to the overall model which accounted a significant portion of the variance at 49.4%. One of the goals of the study was to investigate the possible moderating effects of childhood trauma on the relationship between the aforementioned variables and gambling severity. A second regression was conducted to analyse these effects.

The second model took into account the potential interaction effects of childhood trauma on the independent variables by including the interaction variables in the regression. The overall model demonstrated a substantial increase in the ability to predict problem gambling severity accounting for 61% of the

variance in CPGI scores. It predicted 78.1% of the gambling severity (CPGI) scores for the sample. Once again, emotion-focussed coping (Cemot) was a significant contributor to the model. The interaction between childhood trauma and depression (GDS-CH) was also significant in the model indicating that the presence (or absence) of a history of childhood trauma seems to moderate the relationship between depressive symptomatology and degree of problem gambling.

The final statistical model in this study evaluated all variables from the previous two models with the addition of the measures of dissociation during gambling (Dissgam) and dissociation in general (Dissgen). The model was extraordinarily successful at predicting gambling severity, accounting for 83.3% of the variance in problem gambling severity scores as measured by the Canadian Problem Gambling Index (CPGI). The model was able to predict 91.3% of the CPGI scores for the sample. The final model included emotion-focussed coping (Cemot), depression (GDS), dissociation during gambling (Dissgam), the interaction of depression and childhood trauma (GDS-CH), and the interaction between childhood trauma and perceived stress (PSS-CH). Physical or medical problems, perceived stress and dissociation during general life activities did not result in a significant increase in the ability of the model to account for problem gambling severity. While one of the primary reasons for this may be the extremely high collinearity found among all variables, a brief discussion about other possible reasons will be presented.

The significant difference on the PSS between the No-to-Low Risk gamblers (NLGs) and the Moderate-Risk-to-Problem Gamblers (MPGs),

combined with the very high correlations between gambling severity (CPGI) and perceived stress (PSS) ($r=.60$, $p<.001$) indicate that increased scores on the PSS coincide with higher levels of gambling severity and vice versa. However, the fact that the PSS was also very highly correlated with both the depression scales (GDS) and emotion-focussed coping (Cemot) resulted in a lack of significance in the regression model. Research has demonstrated that daily and chronic stress, and how it is coped with, are often triggers of depressive symptomatology (Holm & Holroydm 1992). Stress-vulnerability models, such as that proposed by Brown & Harris (1989), propose that vulnerability factors, including coping style, interact with both chronic and daily stressors and eventually lead to depression. The high collinearity found in this study is consistent with this theory. A closer examination of the relationship between stress, coping, and depression is needed to identify the direction of causality, especially with respect to addiction. Research of this nature would assist in both prevention and treatment of addictions: if stress and depression predict gambling, then treating the problem behaviour would require addressing the sources of these factors and helping individuals learn adaptive ways to cope with them.

Similar to perceived stress, the measure of physical and medical problems (MedTot) was dropped from the regression models likely as a result of the high collinearity it shared with depression, perceived stress and emotion-focussed coping (GDS, PSS and Cemot respectively). The measure of medical and physical difficulties (MedTot) was significantly correlated with gambling severity (CPGI) ($r=.51$, $p<.001$) suggesting that a relationship exists between gambling severity and

physical difficulties. There has been virtually no research examining the interaction of physical problems with problem gambling. Research examining physical problems and other addictions has found varying results. Marlatt & Gordon (1985) found that poor health and personal difficulties resulted in increased alcohol consumption. However, how to interpret the relationship between somatic complaints and addictive behaviours is not clearly defined.

One of the concerns that Brennan & Moos (1990) point out with respect to research on physical illness or disability and any subsequent behaviour is the potential overlapping effects of different factors, including chronic stress as opposed to discrete negative events, onset (early or late) of the behaviour and the physical difficulties, and social support. Individuals who have been addicts, or have been suffering from physical difficulties, for several years are likely to have different circumstances (i.e. less social support, reduced financial means) than those who have only recently initiated an addictive pattern of behaviour or started suffering from pain or illness. Along the same lines, those who start gambling late in life are likely to report different reasons, or causes for the behaviour's onset than those who have been life-long gamblers. Controlling for factors such as these is difficult but is necessary when examining the relationship of health changes and chronic, or discrete, life events with problem gambling behaviour. While it appears that there is a relationship between gambling and physical or medical complaints, future research is strongly needed to clarify the effects that one may have on the other.

To summarize, findings suggest that each of the following individually

predict an increase in problem gambling severity: a tendency to employ emotion-oriented coping as opposed to task-oriented or avoidance-oriented coping, increased symptoms of depression, dissociation during gambling, and the interaction between childhood trauma with perceived stress, depressive symptoms, and emotion-oriented coping styles. Overall, the model in this study strongly suggests that these factors in combination lead to a high likelihood of problem gambling behaviour. This model is consistent with the literature, including Jacobs' and Blaszczynski's theories which will be reviewed later. A closer examination of each of the factors in the model is warranted. The following paragraphs will review the relationships between coping strategies, depression and gambling. Dissociation and the interaction effects between depression and perceived stress with childhood trauma will be discussed in reference to Jacobs' model.

Coping Strategies

Positive coping is typically believed to incorporate problem-solving, or task-oriented strategies that enable an individual to employ a wide range of options when confronted with a stressful situation. Negative coping styles in contrast tend to be avoidance-oriented, allowing relief or escape from the situation, or emotion-oriented which generally results in negative affective states, self-blame and/or rumination. Given the multiple life changes that are common in older persons (retirement, loss of loved ones, etc.) being able to handle stress and change in an adaptive manner is especially important. It was hypothesized that moderate-to-high risk and problem gamblers (MPGs) would be more likely to employ negative coping strategies whereas no-to-low risk gamblers (NLGs) would tend to cope

with stress in a positive task-oriented way as measured by the Coping Inventory for Stressful Situations (CISS). Results confirmed the hypothesis: moderate-to-problem gamblers were more likely to report emotion-focused (Cemot) and avoidance-focused (Cavoid) strategies, and less likely to employ task-oriented coping strategies than no-risk to low-risk gamblers.

It was further hypothesized that types of coping, negative or positive would strongly relate to problem gambling severity with either of the negative avoidance or emotion-focused stategies predicting greater problems, and the positive task-oriented stategy suggesting fewer problems with gambling. As expected, increased scores on task-oriented coping significantly related to lower gambling severity scores while emotion-focused coping was found to positively relate to gambling severity. Avoidance-focused strategies did not reveal a significant relationship with problem gambling and was dropped from all models. This lack of relationship may be attributable to the fact that it appears the majority of the moderate-to-problem gamblers employed an emotion-focused coping strategy. Also, older adults tend to seek out as much social contact as possible. Social contact, as exemplified by the qualitative analysis in this study, serves as a diversion, or an escape, from what many may consider to be an unpleasant life circumstance. Rather than employing avoidance-coping to attain distraction or escape, older persons may be finding their escape through other means, specifically social contact. The very high dissociation during gambling that was evidenced in this study also provides an escape. This likely holds true regardless of whether one was subjected to trauma as a child, and regardless of whether or not one gambles

at a problem level.

Overall, the tendency to use emotion-focused strategies was one of the main significant predictors of gambling severity. Emotion-focused strategies tend to include self-preoccupation, fantasy, and other concious activities related to the regulation of affect (Endler & Parker, 1990). The findings of this study are consistent with research with adolescents which has demonstrated that problem gamblers are more likely than non-problem gamblers to employ emotion-oriented strategies. Negative coping styles are typically viewed as a vulnerability that stems from a biological or environmental basis, or both. From an environmental perspective, during development an individual may learn to use a faulty coping style. This notion is consistent with the significant interaction between Cemot and childhood trauma. Early abuse or neglect may lead an individual to have to deal with emotions and experiences that they are not mature or life-experienced enough to understand or to handle. As a result, they may have to develop other ways of coping, such as dissociation. If these strategies are "successfully" employed long enough, it is probable that they become engrained and essentially become a default method of handling stressful situations. Maladaptive coping styles are believed to mediate between the occurrence of stress and seeking out activities that may be addictive. People who employ emotion-oriented strategies generally handle stress by using fantasy and/or self-preoccupation strategies. Such strategies are essentially an internal means of escape. Gambling therefore is attractive to such individuals as it offers a means of escape not only from stress, but also from their negative affective state which they have typically tried to handle through poor

coping. This is consistent with Jacobs' theory that gambling serves as a way of regulating internal states that are due to the presence of an emotional vulnerability. The considerable effects of emotion-oriented coping found in this study indicate that it plays a significant role in the development and maintenance of problem gambling. Future research is needed to more closely examine the relationship between coping style and gambling, especially in older adults. Implications extend to prevention as well as treatment. Helping individuals identify their tendencies to use emotion-focused strategies such as self-preoccupation and fantasy and teaching them to use active, problem-solving strategies instead may be an essential component of treatment for problem gamblers, and for other addicts as well.

Depressive Symptomatology

The literature over the past 20 years has demonstrated consistently that depression is extremely common among individuals who exhibit addictive behaviours, including gambling (Getty, Watson, & Frisch, 2000; Simon et. al., 1995). Research has also shown that the incidence of depression tends to increase with age (Palsson et. al., 2001). Recent findings suggest that as high as 40% of older persons exhibit symptoms of depression. Results from this study indicated that over a quarter of the sample (25.3%) reported that they had at some point in their lives felt seriously depressed. Fourteen (12 of whom scored in the MPG range) out of 91 participants (15.4%) reported mild to moderate symptoms of depression during the past 12 months. An additional six, five of whom were MPGs, reported clinically significant levels of depression. Depression is characterized mainly by negative affect which exhibits itself through anxiety,

depressed mood, and somatic complaints. In an attempt to relieve the negative state and alleviate symptoms, individuals will often seek means of distraction or escape in an attempt to self-medicate. Gambling may serve to relieve these feelings for some individuals.

It was hypothesized that depression and gambling severity would exhibit a strong relationship and that subsequently MPGs would report a greater frequency of depressive symptoms than NLGs. Results supported these hypotheses: MPGs reported a significantly greater number of depressive symptoms on the GDS than NLGs. The strong relationship between depression and problem gambling was evidenced by the high correlations ($r=.62$, $p<.001$) and the significant portion of variance in CPGI scores that was accounted for by the GDS in all three models. Depression and emotion-focused coping were the only significant factors for all three models indicating the strong, often related effect they have on gambling severity.

Depression: Negative Life Events, Social Isolation, and Loneliness

Although life events, social isolation and loneliness were not quantitatively investigated in this study, they were predominant factors raised by participants during the interviews. Given the direct relationship between these factors and depression, it is appropriate to address these issues in this section. A review of the qualitative interviews further supports the relationship between depression and gambling. Although depression was not specifically asked about, several of the participants referred to both significant life events that are linked with depression, and symptoms that are generally indicative of depression. Many reported feelings

of sadness and loneliness that were alleviated once they started gambling. "Escape" and "distraction" were very common phrases used by those interviewed when talking about what they found compelling about gambling. Gambling resulted in a sense of belonging, an increase in self-esteem, enjoyment, and a feeling of control over something in their lives. This was rewarding for the individuals and for many subsequently led to problem gambling. All of these responses are indicative of depressive symptoms such as sadness, low self-efficacy, anhedonia, and feelings of worthlessness.

One of the primary reasons for interviewing a subset of the sample was to try and determine what factors were related to the *onset* of their gambling behaviour, and subsequently their problem gambling patterns. One of the weaknesses of this study was the fact that the questionnaires were designed to measure activities, thoughts, emotions, in the past 12 months. While they could have been manipulated to ask individuals to respond in reference to when they started gambling, it was decided that this was not the best route for two reasons. First, a large majority of the participants have been gambling for many years. Several of them had difficulty just remembering the first time they gambled. Asking them to remember whether or not they were depressed, or dealing with daily stress, or how they tended to cope with things, would have resulted in "best guesses" for most. The retrospective nature of such an approach would have diminished the validity of the findings. Asking people about these factors over the past 12 months is likely to result in more accurate responses, less biased by difficulties with memory. The fact that virtually all of the participants had gambled

in the past year allows for examination of the relationship between the various factors and current gambling behaviour.

The second reason for not gearing the questionnaires to when people first started gambling was that, without explanation, it is likely that many participants would have been confused about what qualified as their first time gambling: was it the first lottery ticket they bought, the first time they went to the casino, and so on. In addition, as was revealed in the interviews, motivation and reasons for *first* experiences with gambling were generally curiosity, social contact, and/or fun. In exploring what *kept* people gambling it became evident that other factors (such as escape, distraction, and feeling socially accepted) were far more salient although not necessarily recognized at first by the interviewee as contributing to their problem gambling patterns. This was one of the primary reasons for adding a qualitative format in the first place. Regardless of what time reference the questionnaires were geared towards, it is unlikely that the measures would have been able to accurately reveal the apparent, and more importantly the non-apparent processes driving gambling behaviour.

A large percentage of the interviewed participants reported some type of significant loss in their life prior to starting to gamble regularly. Many suffered the loss of a significant other, others were forced to retire, and some had to move out of their homes and into retirement centres. All of these constitute significant negative life-events and subsequent dramatic changes in social, financial, and personal circumstances. Given the population, these findings are not surprising and support literature in the field. Numerous studies have shown the strong

relationship between negative life-events and depression (Denihan et. al., 2000; Martin & Haynes, 2000). The occurrence of a negative-life event has also been found to relate to increased alcohol consumption suggesting the need to find an outlet for the feelings of loss and often abandonment, especially when the life-event involves bereavement.

For older persons, losses and significant changes in their lives are almost commonplace occurring. While the events themselves may lead directly to the need to escape, it is often the changes that result from the event that are the hardest to deal with (Brennan & Moos, 1990). Many of the participants in this study reported that they lost much of their social support and contacts following the loss of a partner, or retirement, or personal physical difficulties. These changes tended to lead to social isolation which elicited feelings of worthlessness and loneliness, two common features of depression. This supports research in the field that suggests that changes in social support are predictive of higher depression scores. For this subsample, the initiation and maintenance of gambling patterns served to alleviate both of these conditions, in addition to providing an emotional escape from the sadness they were experiencing. Gambling allowed them to interact socially, gave them a reason to get out of the house, and provided a sense of being alive, all aspects of life that they felt they were missing.

Some researchers have suggested that gambling is a "social" or "recreational" outlet for seniors, arguing that gambling is good for them. For example, Hope & Havir (2002) found little evidence that casino gambling threatens older adults well-being, or that they were more likely than any other age group to

develop problems with gambling. It should be noted however that the sample was very small (n=22). While gambling does include some positive aspects for many seniors, such as social contact and activity, it is unfair to say that the advantages outweigh the disadvantages for all. While social activity is certainly positive, if gambling is the only source for it then the probability exists that individuals may gamble more than they can afford in order to maintain an active and interpersonal lifestyle. The occurrence of negative life-events and the presence of depressive symptoms may lead to an even larger problem for some individuals in that the gambling behaviour, and all of it's "rewards", become addictive. Identifying who is at risk to develop such behaviour is essential and requires considerable research. Problem gambling and older persons is a relatively new focus of research and one of the goals should be to first identify risk factors, similar to this study, and secondly find ways to prevent the addictive pattern from beginning. The social acceptance of gambling, and it's easy access in many communities, have made it a convenient and at times preferred activity for many older persons. Many retirement homes actively facilitate transportation to casinos and bingo halls. The notion that gambling is an addictive behaviour and that older persons may be especially vulnerable is something that must be made aware to the community at large in order to hopefully prevent potential difficulties for seniors.

It is clear from the interviews conducted in this study that for most, the onset and maintenance of regular gambling, and subsequent problem gambling behaviour was at least related to, if not triggered by, significant changes in their lives. These changes appear to have either led directly to sadness and depressive

symptomatology, or to feelings of loneliness and changes in independence and social support which then subsequently elicited traits of depression. The discovery of gambling resulted in initial excitement which later turned into distraction and escape from the unpleasant state they were in. This was supported by the fact that gambling provided them with a renewed sense of life, social activity, and a sense of belonging. The presence of a negative affective state prior to the onset of gambling at a problem level supports stress-vulnerability models including Jacobs'. Future research needs to further investigate the directionality and causation between negative life-events, depression and addictive behaviour, specifically gambling. One of the flaws in this study is the retrospective nature of responses provided by participants. Retrospective studies in general raise questions about the accuracy of findings with potential questions surrounding individuals' memory and recollection. Future research may improve on this design by using collateral information from friends and/or family to confirm personal responses. In addition, a longitudinal investigation would provide a much clearer examination of the process and factors involved in the onset of problem gambling behaviour.

Blaszczynski (2000) proposes that problem gamblers are not a homogenous group, and that they can be divided into one of three typologies: "Normal", Emotionally Disturbed, and Biologically Predisoposed. The quantitative findings of this study support Blaszczynski's theory that depression, anxiety, and daily stressors are related to gambling and are more common in individuals who are heavy and problem gamblers. The relationship between these factors is core to both the Normal and Emotionally Disturbed groups of

Blaszczynski's model. The fact that those who reported less gambling severity also tended to report fewer problems with depression, stress, and coping supports the notion that gamblers are not necessarily a homogenous group.

One of the main differences between the Normal and Emotionally Disturbed groups, according to Blaszczynski, is the causality of the relationships between gambling psychopathology. Normal gamblers are theorized to exhibit depressive features and gambling preoccupation as a *consequence* of gambling. In contrast, Emotionally Disturbed gamblers are believed to develop problems with gambling as a *result* of negative affective states and depression.

It is difficult to interpret the quantitative findings for direction of causality. Review of the qualitative data however reveals that the participants generally reported depressive symptoms (largely in response to negative life-events) prior to the onset of their gambling problems, with most reporting that their gambling was a response to negative affect as it served as an escape. This suggests that older moderate-risk and problem gamblers, at least those investigated in this sample, seem to fit into the second, or Emotionally Disturbed typology of Blaszczynski's model. The fact that the these individuals also reported more maladaptive coping styles and a greater incidence of childhood trauma also supports this typology.

Blaszczynski (2000) proposes that one of the primary reasons that gamblers need to be recognized as a heterogenous group and more accurately classified is to identify and improve therapeutic strategies. The three typologies of his model would presumably require different approaches and degrees of therapeutic intervention. Normal gamblers would likely require minimal

interventions and counselling and self-help groups such as Gambler's Anonymous would likely be additionally effective. Blaszczynski suggests that this group may be able to resume controlled gambling following treatment. Emotionally Disturbed gamblers in contrast are likely to require more extensive therapy including interventions aimed at improving their coping styles and treating their depressive symptomatology. For older problem gamblers, therapeutic endeavours would also need to include finding alternative means by which individuals can connect with the community, handle their ever-changing circumstances, and learn better methods of coping with feelings of isolation, sadness, and worthlessness. As with any psychological difficulty, treatment needs to be geared towards the individual and their circumstances. However, being able to identify commonalities within specific groups of gamblers would ultimately improve therapeutic strategies and facilitate more rapid improvement.

Overall, the differences found between the two gambling severity groups in this study support Blaszczynski's theory that gamblers are not a homogenous group. The causal relation observed in this study between depressive symptomatology and gambling onset suggest that older problem gamblers may be best classified as Emotionally Disturbed gamblers. Blaszczynski (2000) based the Emotionally Disturbed typology on several studies and to a large extent on findings supporting Jacob's General Theory of Addictions (Jacobs, 1986; 1998). The following section will review the results of this study with respect to Jacobs' theory.

Jacobs' General Theory of Addictions

The rationale for investigating the relationship between gambling and many of the factors in this study was based largely on Jacobs' General Theory of Addictions. Jacobs' proposes that two sets of predisposing factors must be present for an individual to be at risk of developing an addictive behaviour. The first factor is that the individual must demonstrate an abnormal physiological resting state that is either chronically excited or hypertensive, or chronically under-aroused or hypotensive. The second factor is that the individual has a psychological make-up that is characterized by feelings of inferiority, low self-esteem, and guilt stemming from childhood. These feelings and the negative affect associated with them cause the individual to try and find ways to cope with or self-treat. The two factors, combined with a conducive environment, may lead to an addictive behaviour which allows the individual to "escape" from the combined biological and psychological distress they are experiencing. The "escape" may result in an altered state which is due to an accompanying dissociative experience. A goal of this study was to examine the second factor of the theory as well as to investigate the relationship between dissociation, escape, and gambling behaviour.

Results confirm the hypothesis that dissociation, during gambling and in general, is highly correlated with gambling severity. In the final regression model, the addition of dissociation during gambling resulted in a very large increase in the overall predictive ability of the model. Moderate-to-problem gamblers (MPGs) were also found to be significantly more likely to report dissociative experiences than no-to-low risk gamblers (NPGs). In addition, the majority of the interviewees

reported that feelings of escape and distraction were predominant reasons that they continued to gamble despite the negative consequences. This supports Jacobs' theory that dissociation is more common in problem-gamblers and that an altered state resulting from the dissociative experience serves as an escape and is a rewarding as well as reinforcing feature of the addictive behaviour, in this case gambling. The fact that many individuals continue to gamble despite sometimes severe negative consequences is testament to the strength of the rewarding influence of escape through dissociation.

The finding that those who reported dissociation in early life were more likely to dissociate currently is also consistent with Jacobs' theory. Dissociation may be a type of coping strategy that is learned at an early age. The fact that it is learned while individuals are young, yet remains dominant across the life-span is an indication of how "effective" dissociation can be at dealing with internal and external stressors.

Of the 28 individuals who indicated moderate risk-to-problem gambling (MPGs) on the Canadian Problem Gambling Index (CPGI), 19 (67.9%) reported some type of childhood trauma (CHT) on the Jacobs' Neglect, Abuse, and Abandonment scale (JNAAP). Closer examination revealed that all but one of those who scored in the problem gambling range reported childhood trauma. The finding that MPGs were more depressed and experienced greater stress than NPGs suggests that their overall affect and subsequent experience was negative in comparison to the NPGs. The responses from interviewees indicated that feelings of inferiority, sadness, and loss were triggers rather than consequences of gambling

behaviour. The combination of negative affect prior to the onset of problem gambling and a history of childhood trauma appear to be strongly related to gambling severity which is consistent with Jacobs' theory. The significant variance of the CPGI accounted for by the interaction of childhood trauma with depression (GDS-CH) and perceived stress (PSS-CH) further implies that a history of childhood trauma moderates the relationship between negative affective states and degree of gambling problems.

While it appears that childhood trauma affects gambling severity by influencing the way one copes with depressive symptoms and stress, it is not clear whether or not the presence or absence of childhood trauma *directly* plays a role in problem gambling. Jacobs' suggests that the chronic trauma resulting from childhood abuse or neglect leads to emotional vulnerability through out the lifetime. Given the chronic nature of the trauma, it is likely that dissociation also becomes a "chronic" response or coping strategy. Following from this, it is possible that childhood trauma is related to, or may even be the cause of the high rates of dissociation found in the problem gamblers. Further research is needed to clarify the role that past childhood trauma plays in the present experience of depression, stress, and anxiety as well as gambling. Research is also needed to investigate why some individuals are able to adapt following trauma, while others are not. Current research investigating the concept of resiliency in adolescences suggests that many factors are involved including problem solving skills, autonomy and social competence (Dickson, Derevensky, & Gupta, 2002).

Overall, the present study supports Jacobs' postulate that a negative

affective state related to chronic trauma stemming from childhood is significantly related to problem gambling. The gambling behaviour may occur by chance but the subseqeunt effects of dissociation and escape are rewarding in that they relieve the negative internal and external states. The dissociative experience appears more likely to be rewarding in individuals that have experienced it earlier in their lives, and may use it as a means of coping. The positive effect of dissociation serves to reinforce the gambling behaviour leading to the development of an addiction.

Summary and Conclusions

The findings of this study suggest that the combination of depressive symptomatology, emotion-oriented coping, daily stressors, dissociation during gambling and the interaction between childhood trauma and these factors are significantly able to predict gambling severity in older adults. Loss of control involved with gambling also seems to be a significant factor in whether or not an individual evolves from a social gambler to a problem gambler. Overall results are consistent with Jacobs' General Theory of Addictions. Future research needs to examine whether or not the combination of depression, emotion-oriented coping, dissociation and childhood trauma similarly predict other addictive behaviours such as alcohol and drug abuse, as would be suggested by Jacobs' model. The findings of such research may result in positive consequences in the early identification, prevention, and treatment of addictions as a whole. In addition, given the extraordinarily high predictability of this study's model, replication of results are recommended to evaluate the external validity and generalizability of these findings not only across addictions, but also across the population of older adult gamblers.

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Appendix A

UNIVERSITY OF WINDSOR

CONSENT TO PARTICIPATE IN RESEARCH

FACTORS INVOLVED WITH PROBLEM GAMBLING BEHAVIOUR IN OLDER ADULTS

You are asked to participate in a research study conducted by Mark Langewisch, M.A., and Dr. G.R. Frisch, from the Psychology Department at the University of Windsor. The results of this study will contribute to the completion of a dissertation required for a Ph.D. in Clinical Psychology.
If you have any questions or concerns about the research, please feel free to contact DR. G.R. Frisch at the University of Windsor at 519-973-7012.

- **PURPOSE OF THE STUDY**

The purpose of the present study is to investigate the relationship between various factors, past and present, that may or may not have an effect on gambling behaviour in adults over the age of 55.

- **PROCEDURES**

If you volunteer to participate in this study, we would ask you to do the following things:
Participants will be asked to complete a series of questionnaires regarding their past and present daily living experiences, including questions about their childhood, their gambling behaviour and activities, physical and/or psychological difficulties, and ways of handling stress. Participants MAY also participate in a brief interview with the investigator if they so choose. The questionnaires take approximately 30-45 minutes to complete and the interview, if chosen, is about 30 minutes long. All questionnaires and the interview will be conducted at the Problem Gambling Research Centre on the University of Windsor Campus. If participants are interested in the research findings of the study, they may leave their contact information (either address, phone number, or e-mail) and they will be sent the relevant findings upon completion of the project. Results will also be posted at the local Seniors Centre and at the Ontario Problem Gambling Research Council's website.

- **POTENTIAL RISKS AND DISCOMFORTS**

Some of the questions included in this study deal with areas of life that some individuals MAY find uncomfortable talking about. While we feel that it is unlikely, should such difficulties arise, participants have the right to refuse to answer these questions. If they find it upsetting, they will be given the opportunity to address their concerns with the investigator and if they feel further support is needed, they will be referred to mental health services in the community.

- **POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

Participation in this study allows individuals to discuss openly, and examine, any difficulties surrounding their gambling activities they may have, in a confidential setting. Such examination may provide comfort to some individuals and may further lead to evaluation and recognition of the possible need for professional assistance in dealing with such possible concerns.

The results of this study are expected to contribute to academic and practical understanding of why certain individuals develop problems with gambling while others do not. The application of these results should improve our ability to identify potential factors associated with problem gambling and subsequently increase our ability to prevent, treat, and educate people who are, or may be, at risk for developing difficulties with gambling.

- **PAYMENT FOR PARTICIPATION**

Participants will be reimbursed for participating in this study in the form of $20.00 in Shoppers Drug Mart gift certificates. They will be offered an additional $5.00 in gift certificates should they refer someone else who also participates in the study.

- **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission.

No identifying information will be required on any of the questionnaires or the interview thereby assuring complete anonymity and confidentiality. Completed consent forms will be kept separate from questionnaires to prevent any possible connection between identity and responses. Questionnaires will be destroyed after data has been removed and reviewed for accuracy. Results of the study may be published in an academic journal at a later date. No individual identifying information will be released to the publisher.

- **PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

- **RIGHTS OF RESEARCH SUBJECTS**

You may withdraw your consent at any time and discontinue participation without penalty. This study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board. If you have questions regarding your rights as a research subject, contact:

Research Ethics Co-ordinator
University of Windsor
Windsor, Ontario
N9B 3P4

Telephone: 519-253-3000, # 3916
E-mail: ethics@uwindsor.ca

- **SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE**

I understand the information provided for the study "Factors Involved With Gambling Behaviour in Older Adults" as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____
Name of Subject

_____ _____
Signature of Subject Date

- **SIGNATURE OF INVESTIGATOR**

In my judgement, the subject is voluntarily and knowingly giving informed consent to participate in this research study.

_____
Signature of Investigator Date

Appendix B
Debriefing Form

Title of Project: Factors Associated With Problem Gambling Behaviour in Older Adults

Researcher: Mark W. Langewisch. M.A.

Advisor: Dr. G. R. Frisch

Thank you again for participating in my study. The focus of my study was to investigate the relationship between depression, life events, social support, personal/childhood history, and current stress with gambling behavior. These areas have been studied with a younger adult population (age 25-45) but little research has looked at a older adults in the general population. My hypothesis is that the relationship between gambling behaviour, symptoms of depression, feelings of loneliness and/or isolation, significant life-events including personal loss, change in lifestyle, the need for escape and/or excitement, as well as a number or other variables will be extremely high. I also believe that a significant relationship exists between these different areas regarding quality of life and the need for external pleasure, stimulation, and/or reward. Results of my study will hopefully lead to a better understanding of why people, older adults specifically, develop gambling problems. If you have any further questions, please feel free to contact me through the psychology department at the University of Windsor (519-253-3000).

Appendix C

JACOBS NEGLECT, ABANDONMENT AND ABUSE PROTOCOL (J-NAAP, 2002)

Please answer each of the following questions about your childhood with care and complete honesty. I'm here, should you need any help.

SECTION I - LOSS OR ABANDONMENT

For all of the following questions please fill in marks like this: ●

As a youth, were you ever the victim of **loss or abandonment**? (That is, before you were 18 years of age, you experienced loss of or abandonment by, one or both of your parents because of death, divorce, separation, flight, hospitalization, or incarceration).

Yes ○
No ○

If you answered yes, please continue, If you answered no, please go to Section II.

A. Indicate EACH of the following periods of your life when **loss or abandonment** occurred. Indicate all that apply:

○ before I was 5 years old
○ when I was 5 to 8 years old
○ when I was 9 to 12 years old
○ when I was 13 to 17 years old

B. On a scale of 1 to 7, how severe was the **loss or abandonment** you experienced as a youth? Indicate one (circle).

1	2	3	4	5	6	7
Extremely Severe			Moderate			Tolerable

C. How frequently did the **loss or abandonment** occur? Indicate one.

1	2	3	4	5	6	7
Isolated incident		Daily		Many times a week		Several times a month

D. To what extent does the **loss or abandonment** you experienced impact your life today?
○ It affects everything I do and feel.
○ It affects my life a lot, but not everything I do and feel.
○ It does not affect my life or feelings at all.

E. During the time when you experienced **loss or abandonment**, with whom were you living? Completely fill in all that apply:

- ○ mother, father, or step parents
- ○ grand parents
- ○ foster parent(s) or legal guardians
- ○ with other relatives
- ○ with a neighbour or family friend
- ○ with staff in an institution
- ○ on my own, on the streets

F. Indicate the one person you believe was most responsible for your **loss or abandonment**.

- ○ mother
- ○ father
- ○ stepmother
- ○ stepfather
- ○ grandmother
- ○ grandfather
- ○ foster mother
- ○ foster father
- ○ legal guardian
- ○ other relatives
- ○ family friend
- ○ neighbour
- ○ institution staff

If it was someone not listed above, indicated their relationship to you from the list below:

- ○ teacher
- ○ clergy
- ○ coach
- ○ female friend
- ○ male friend
- ○ other

If other please explain: _____

_____

G. For **each** of the following 5 reactions circle the number that indicates how often they may have occurred while you were experiencing **loss or abandonment**.

1 = NEVER
2 = SOMETIMES
3 = MOST OF THE TIME
4 = ALMOST ALWAYS

Reactions	**Did this occur?** (Circle your answer)			
I felt like I was in a trance while it was happening	1	2	3	4
I felt like I was a different person while it was happening	1	2	3	4
I felt like I was outside myself, watching myself and what was happening - like in a dream	1	2	3	4
I had memory blackouts for things that were happening during the time	1	2	3	4
I lost all track of time while it was happening	1	2	3	4

H. **During the time** or times when your **loss or abandonment** was occurring, to what extent did you blame yourself or feel guilty about what was happening? (Indicate one).

- ○ At the time it was happening I believed none of what was happening was my fault, and I felt no blame nor guilt about it.
- ○ At the time it was happening, I believed none of it was my fault, but I still felt a little guilty about it.
- ○ At the time it was happening, I believed I may have been a little at fault, and on rare occasions I sort of blamed myself and felt a little guilty about it.
- ○ At the time it was happening, I believed what was happening was as much my fault as anyone's, and I sometimes blamed myself and felt guilty about it.
- ○ At the time it was happening, I believe what was happening was mostly my fault, and often blamed myself and felt guilty about it.
- ○ At the time it was happening I believed what was happening was entirely my fault, and I constantly blamed myself and felt very guilty about it.

I. **Looking back** at the time or times when you had experienced **loss or abandonment**, how do you feel **now**, about what happened? (Indicate one.)

- ○ I now believe none of what happened was my fault, and now I feel no blame or guilt about it.
- ○ I now believe none of it was my fault, but I still feel a little guilty about it.
- ○ I now believe I may have been a little at fault, and on rare occasions I sort of blame myself and feel a little guilty about it.
- ○ I now believe what happened was as much my fault as anyone's, and I sometimes blame myself and feel guilty about it.
- ○ I now believe what happened was mostly my fault, and I often blame myself and feel guilty about it.
- ○ I now believe what happened was entirely my fault, and I constantly blame myself and feel very guilty about it.

J. How did your family members (or caretakers) react when evidence of your **loss or abandonment** became known? (Indicate one).

- ○ They never did find out what had happened to me.
- ○ They would not accept that it happened, and said I had made it up.
- ○ They accepted that it happened, but didn't see anything wrong about it.
- ○ They accepted that it happened, but were cold and distant towards me after it became known.
- ○ They accepted that it happened, but were rejecting and hateful towards me after it became known.
- ○ They accepted that it happened, but blamed me for what happened, and made excuses for the person(s) really at fault.
- ○ Their main concern was wanting to punish the person(s) who had done that to me.
- ○ Their main concern was about me, and they were loving and supportive of my needs.

SECTION II – SERIOUS NEGLECT

As a youth, were you ever the victim of **serious neglect**? (That is, before you were 18 years of age, parents or adults responsible for your care failed to provide what you consider to be minimally sufficient food, clothing, shelter form rain, cold or heat, necessary medical attention, and protection from harm.)

Yes ○
No ○

If you answered yes, please continue. If you answered no, please go to Section III.

A. Indicate EACH of the following periods of your life when **serious neglect** occurred. Indicate all that apply:

○ before I was 5 years old
○ when I was 5 to 8 years old
○ when I was 9 to 12 years old
○ when I was 13 to 17 years old

B. On a scale of 1 to 7, how severe was the **serious neglect** you experienced as a youth? Circle one.

1	2	3	4	5	6	7
Extremely Severe		Moderate			Tolerable	

C. How frequently did the **serious neglect** occur? Indicate one.

1	**2**	**3**	**4**	**5**	**6**	**7**
Isolated incident		daily		many times a week		several times a month

D. To what extent does the **serious neglect** you experienced impact your life today?

○ It affects everything I do and feel.
○ It affects my life a lot, but not everything I do and feel.
○ It does not affect my life or feelings at all.

E. During the time or times when you experienced **serious neglect**, with whom were you living? Completely fill in all that apply:

- ○ mother, father, or step parents
- ○ grandparents
- ○ foster parent(s) or legal guardian
- ○ with other relatives
- ○ with a neighbour or family friend
- ○ with staff in an institution
- ○ on my own, on the streets

F. Indicate the **one** person you believe was most responsible for your **serious neglect**.

- ○ mother
- ○ father
- ○ stepmother
- ○ stepfather
- ○ grandmother
- ○ grandfather
- ○ foster mother
- ○ foster father
- ○ legal guardian
- ○ other relatives
- ○ family friend
- ○ neighbour
- ○ institution staff

If it was someone not listed above, indicate their relationship to you from the list below:

- ○ teacher
- ○ clergy
- ○ coach
- ○ female friend
- ○ male friend
- ○ other

If other please explain: _____

_____

G. For **each** of the following 5 reactions fill in the circle that indicates how often they may have occurred while you were experiencing **serious neglect**.

1 = NEVER
2 = SOMETIMES
3 = MOST OF THE TIME
4 = ALMOST ALWAYS

Reactions	**Did this occur?** (Circle your answer)			
I felt like I was in a trance while it was happening.	1	2	3	4
I felt like I was a different person while it was happening.	1	2	3	4
I felt like I was outside myself, watching myself and what was happening - like in a dream.	1	2	3	4
I had memory blackouts for things that were happening during the time.	1	2	3	4
I lost all track of time while it was happening.	1	2	3	4

H. **During the time** or times when your **serious neglect** was occurring, to what extent did you blame yourself or feel guilty about what was happening? (Indicate one).

- ○ At the time it was happening I believed none of what was happening was my fault, and I felt no blame nor guilt about it.
- ○ At the time it was happening, I believed none of it was my fault, but still I felt a little guilty about it.
- ○ At the time it was happening I believed I may have been a little at fault, and on rare occasions I sort of blamed myself and felt a little guilty about it.
- ○ At the time it was happening I believed what was happening was as much my fault as anyone's, and I sometimes blamed myself and felt guilty about it.
- ○ At the time it was happening I believe what was happening was mostly my fault, and I often blamed myself and felt guilty about it.
- ○ At the time it was happening I believed what was happening was entirely my fault, and I constantly blamed myself and felt very guilty about it.

I. **Looking back** at the time or times when you had experienced **serious neglect**, how do you feel **now**, about what happened? (Indicate one).

- ○ I now believe none of what happened was my fault, and now I feel no blame or guilt about it.
- ○ I now believe none of it was my fault, but I still feel a little guilty about it.
- ○ I now believe I may have been a little at fault, and on rare occasions I sort of blame myself and feel a little guilty about it.
- ○ I now believe what happened was as much my fault as anyone's, and I sometimes blame myself and feel guilty about it.
- ○ I now believe what happened was mostly my fault, and I often blame myself and feel guilty about it.
- ○ I now believe what happened was entirely my fault, and I constantly blame myself and feel very guilty about it.

J. How did your family members (or caretakers) react when evidence of your **serious neglect** became known? (Indicate one).

- ○ They never did find out what had happened to me.
- ○ They would not accept that it happened, and said I had made it up.
- ○ They accepted that it happened, but didn't see anything wrong about it.
- ○ They accepted that it happened, but were cold and distant towards me after it became known.
- ○ They accepted that it happened, but were rejecting and hateful towards me after it became known.
- ○ They accepted that it happened, but blamed me for what happened, and made excuses for the person(s) really at fault.
- ○ Their main concern was wanting to punish the person(s) who had done that to me.
- ○ Their main concern was about me, and they were loving and supportive of my needs.

SECTION III – PHYSICAL ABUSE

As a youth, were you ever the victim of **physical abuse**? (That is, were you ever hit, bitten, burned, beaten with a belt or other object, kicked or thrown, so that you bled a lot, or suffered pain, broken bones, or long-lasting bruises or welts.)

Yes ○
No ○

If you answered yes, please continue. If you answered no, please go to Section IV.

A. Indicate EACH of the following periods of your life when **physical abuse** occurred. Indicate all that apply:

○ before I was 5 years old
○ when I was 5 to 8 years old
○ when I was 9 to 12 years old
○ when I was 13 to 17 years old

B. On a scale of 1 to 7, how severe was the **physical abuse** you experienced as a youth? Indicate one.

1	2	3	4	5	6	7
Extremely Severe		Moderate			Tolerable	

C. How frequently did the **physical abuse** occur? Indicate one.

1	**2**	**3**	**4**	**5**	**6**	**7**
Isolated incident		daily	many times a week			several times a month

D. To what extent does the **physical abuse** you experienced impact your life today?

○ It affects everything I do and feel.
○ It affects my life a lot, but not everything I do and feel.
○ It does not affect my life or feelings at all.

E. During the time or times when you experienced **physical abuse**, with whom were you living? Completely fill in all that apply:

- ○ mother, father, or step parents
- ○ grandparents
- ○ foster parent(s) or legal guardian
- ○ with other relatives
- ○ with a neighbour or family friend
- ○ with staff in an institution
- ○ on my own, on the streets

F. Indicate the **one** person you believe was most responsible for your **physical abuse**.

- ○ mother
- ○ father
- ○ stepmother
- ○ stepfather
- ○ grandmother
- ○ grandfather
- ○ foster mother
- ○ foster father
- ○ legal guardian
- ○ other relatives
- ○ family friend
- ○ neighbour
- ○ institution staff

If it was someone not listed above, indicate their relationship to you from the list below:

- ○ teacher
- ○ clergy
- ○ coach
- ○ female friend
- ○ male friend
- ○ other

If other please explain: _____

G. For **each** of the following 5 reactions please circle the number that indicates how often these reactions may have occurred while you were experiencing **physical abuse**.

1 = NEVER
2 = SOMETIMES
3 = MOST OF THE TIME
4 = ALMOST ALWAYS

Reactions	**Did this occur?** (Circle answer)			
I felt like I was in a trance while it was happening.	1	2	3	4
I felt like I was a different person while it was happening.	1	2	3	4
I felt like I was outside myself, watching myself and what was happening - like in a dream.	1	2	3	4
I had memory blackouts for things that were happening during the time.	1	2	3	4
I lost all track of time while it was happening.	1	2	3	4

H. **During the time** or times when your **physical abuse** was occurring, to what extent did you blame yourself or feel guilty about what was happening? (Indicate one).

- ○ At the time it was happening I believed none of what was happening was my fault, and I felt no blame nor guilt about it.
- ○ At the time it was happening, I believed none of it was my fault, but still I felt a little guilty about it.
- ○ At the time it was happening I believed I may have been a little at fault, and on rare occasions I sort of blamed myself and felt a little guilty about it.
- ○ At the time it was happening I believed what was happening was as much my fault as anyone's, and I sometimes blamed myself and felt guilty about it.
- ○ At the time it was happening I believe what was happening was mostly my fault, and I often blamed myself and felt guilty about it.
- ○ At the time it was happening I believed what was happening was entirely my fault, and I constantly blamed myself and felt very guilty about it.

I. **Looking back** at the time or times when you had experienced **physical abuse**, how do you feel **now**, about what happened? (Indicate one).

- ○ I now believe none of what happened was my fault, and now I feel no blame or guilt about it.
- ○ I now believe none of it was my fault, but I still feel a little guilty about it.
- ○ I now believe I may have been a little at fault, and on rare occasions I sort of blame myself and feel a little guilty about it.
- ○ I now believe what happened was as much my fault as anyone's, and I sometimes blame myself and feel guilty about it.
- ○ I now believe what happened was mostly my fault, and I often blame myself and feel guilty about it.
- ○ I now believe what happened was entirely my fault, and I constantly blame myself and feel very guilty about it.

J. How did your family members (or caretakers) react when evidence of your **physical abuse** became known? (Indicate one).

- ○ They never did find out what had happened to me.
- ○ They would not accept that it happened, and said I had made it up.
- ○ They accepted that it happened, but didn't see anything wrong about it.
- ○ They accepted that it happened, but were cold and distant towards me after it became known.
- ○ They accepted that it happened, but were rejecting and hateful towards me after it became known.
- ○ They accepted that it happened, but blamed me for what happened, and made excuses for the person(s) really at fault.
- ○ Their main concern was wanting to punish the person(s) who had done that to me.
- ○ Their main concern was about me, and they were loving and supportive of my needs.

SECTION IV – EMOTIONAL ABUSE

As a youth, were you ever the victim of **emotional abuse**? (That is, you were repeatedly made to feel unwanted, worthless, unloved, inferior, and/or you were repeatedly told you were no good, or could do nothing right, and you were made to feel guilty or ashamed.)

Yes ○
No ○

If you answered yes, please continue. If you answered no, please go to Section V.

A. Indicate EACH of the following periods of your life when **emotional abuse** occurred. Indicate all that apply:

○ before I was 5 years old
○ when I was 5 to 8 years old
○ when I was 9 to 12 years old
○ when I was 13 to 17 years old

B. On a scale of 1 to 7, how severe was the **emotional abuse** you experienced as a youth? Circle one.

1 2 3 4 5 6 7

Extremely Severe — Moderate — Tolerable

C. How frequently did the **emotional abuse** occur? Indicate one.

1 2 3 4 5 6 7

Isolated incident — daily — many times a week — several times a month

D. To what extent does the **emotional abuse** you experienced impact your life today?

○ It affects everything I do and feel.
○ It affects my life a lot, but not everything I do and feel.
○ It does not affect my life or feelings at all.

E. During the time or times when you experienced **emotional abuse**, with whom were you living? Completely fill in all that apply:

- ○ mother, father, or step parents
- ○ grandparents
- ○ foster parent(s) or legal guardian
- ○ with other relatives
- ○ with a neighbour or family friend
- ○ with staff in an institution
- ○ on my own, on the streets

F. Indicate the **one** person you believe was most responsible for your **emotional abuse.**

- ○ mother
- ○ father
- ○ stepmother
- ○ stepfather
- ○ grandmother
- ○ grandfather
- ○ foster mother
- ○ foster father
- ○ legal guardian
- ○ other relatives
- ○ family friend
- ○ neighbour
- ○ institution staff

If it was someone not listed above, indicate their relationship to you from the list below:

- ○ teacher
- ○ clergy
- ○ coach
- ○ female friend
- ○ male friend
- ○ other

If other please explain: _____

G. For **each** of the following 5 reactions circle the number that indicates how often they may have occurred while you were experiencing **emotional abuse**.

1 = NEVER
2 = SOMETIMES
3 = MOST OF THE TIME
4 = ALMOST ALWAYS

Reactions	**Did this occur?** (Circle your answer)			
I felt like I was in a trance while it was happening.	1	2	3	4
I felt like I was a different person while it was happening.	1	2	3	4
I felt like I was outside myself, watching myself and what was happening - like in a dream.	1	2	3	4
I had memory blackouts for things that were happening during the time.	1	2	3	4
I lost all track of time while it was happening.	1	2	3	4

H. **During the time** or times when your **emotional abuse** was occurring, to what extent did you blame yourself or feel guilty about what was happening? (Indicate one).

- ○ At the time it was happening I believed none of what was happening was my fault, and I felt no blame nor guilt about it.
- ○ At the time it was happening, I believed none of it was my fault, but still I felt a little guilty about it.
- ○ At the time it was happening I believed I may have been a little at fault, and on rare occasions I sort of blamed myself and felt a little guilty about it.
- ○ At the time it was happening I believed what was happening was as much my fault as anyone's, and I sometimes blamed myself and felt guilty about it.
- ○ At the time it was happening I believe what was happening was mostly my fault, and I often blamed myself and felt guilty about it.
- ○ At the time it was happening I believed what was happening was entirely my fault, and I constantly blamed myself and felt very guilty about it.

I. **Looking back** at the time or times when you had experienced **emotional abuse**, how do you feel **now**, about what happened? (Indicate one).

- ○ I now believe none of what happened was my fault, and now I feel no blame or guilt about it.
- ○ I now believe none of it was my fault, but I still feel a little guilty about it.
- ○ I now believe I may have been a little at fault, and on rare occasions I sort of blame myself and feel a little guilty about it.
- ○ I now believe what happened was as much my fault as anyone's, and I sometimes blame myself and feel guilty about it.
- ○ I now believe what happened was mostly my fault, and I often blame myself and feel guilty about it.
- ○ I now believe what happened was entirely my fault, and I constantly blame myself and feel very guilty about it.

J. How did your family members (or caretakers) react when evidence of your **emotional abuse** became known? (Indicate one).

- ○ They never did find out what had happened to me.
- ○ They would not accept that it happened, and said I had made it up.
- ○ They accepted that it happened, but didn't see anything wrong about it.
- ○ They accepted that it happened, but were cold and distant towards me after it became known.
- ○ They accepted that it happened, but were rejecting and hateful towards me after it became known.
- ○ They accepted that it happened, but blamed me for what happened, and made excuses for the person(s) really at fault.
- ○ Their main concern was wanting to punish the person(s) who had done that to me.
- ○ Their main concern was about me, and they were loving and supportive of my needs.

SECTION V – SEXUAL ABUSE

As a youth, were you ever the victim of **sexual abuse**? (That is, you were fondled, seduced or forcibly raped by an adult, or you were otherwise led by a person in a position of power or control to participate in, or observe, sexual activities involving genital, oral or masturbatory contacts.)

Yes ○
No ○

If you answered yes, please continue. If you answered no, this concludes the questionnaire. **THANK YOU.**

A. Indicate EACH of the following periods of your life when **sexual abuse** occurred. Indicate all that apply:

○ before I was 5 years old
○ when I was 5 to 8 years old
○ when I was 9 to 12 years old
○ when I was 13 to 17 years old

B. On a scale of 1 to 7, how severe was the **sexual abuse** you experienced as a youth? Indicate one.

1	2	3	4	5	6	7
Extremely Severe		Moderate			Tolerable	

C. How frequently did the **sexual abuse** occur? Indicate one.

1	2	3	4	5	6	7
Isolated incident		daily		many times a week		several times a month

D. To what extent does the **sexual abuse** you experienced impact your life today?

○ It affects everything I do and feel.
○ It affects my life a lot, but not everything I do and feel.
○ It does not affect my life or feelings at all.

E. During the time or times when you experienced **sexual abuse**, with whom were you living? Completely fill in all that apply:

- ○ mother, father, or step parents
- ○ grandparents
- ○ foster parent(s) or legal guardian
- ○ with other relatives
- ○ with a neighbour or family friend
- ○ with staff in an institution
- ○ on my own, on the streets

F. Indicate the **one** person you believe was most responsible for your **sexual abuse**.

- ○ mother
- ○ father
- ○ stepmother
- ○ stepfather
- ○ grandmother
- ○ grandfather
- ○ foster mother
- ○ foster father
- ○ legal guardian
- ○ other relatives
- ○ family friend
- ○ neighbour
- ○ institution staff

If it was someone not listed above, indicate their relationship to you from the list below:

- ○ teacher
- ○ clergy
- ○ coach
- ○ female friend
- ○ male friend
- ○ other

If other please explain: _____

G. For **each** of the following 5 reactions circle the answer that indicates how often they may have occurred while you were experiencing **sexual abuse**.

1 = NEVER
2 = SOMETIMES
3 = MOST OF THE TIME
4 = ALMOST ALWAYS

Reactions	**Did this occur?** (Circle your answer)			
I felt like I was in a trance while it was happening.	1	2	3	4
I felt like I was a different person while it was happening.	1	2	3	4
I felt like I was outside myself, watching myself and what was happening - like in a dream.	1	2	3	4
I had memory blackouts for things that were happening during the time.	1	2	3	4
I lost all track of time while it was happening.	1	2	3	4

H. **During the time** or times when your **sexual abuse** was occurring, to what extent did you blame yourself or feel guilty about what was happening? (Indicate one).

- ○ At the time it was happening I believed none of what was happening was my fault, and I felt no blame nor guilt about it.
- ○ At the time it was happening, I believed none of it was my fault, but still I felt a little guilty about it.
- ○ At the time it was happening I believed I may have been a little at fault, and on rare occasions I sort of blamed myself and felt a little guilty about it.
- ○ At the time it was happening I believed what was happening was as much my fault as anyone's, and I sometimes blamed myself and felt guilty about it.
- ○ At the time it was happening I believe what was happening was mostly my fault, and I often blamed myself and felt guilty about it.
- ○ At the time it was happening I believed what was happening was entirely my fault, and I constantly blamed myself and felt very guilty about it.

I. **Looking back** at the time or times when you had experienced **sexual abuse**, how do you feel **now**, about what happened? (Indicate one).

- ○ I now believe none of what happened was my fault, and now I feel no blame or guilt about it.
- ○ I now believe none of it was my fault, but I still feel a little guilty about it.
- ○ I now believe I may have been a little at fault, and on rare occasions I sort of blame myself and feel a little guilty about it.
- ○ I now believe what happened was as much my fault as anyone's, and I sometimes blame myself and feel guilty about it.
- ○ I now believe what happened was mostly my fault, and I often blame myself and feel guilty about it.
- ○ I now believe what happened was entirely my fault, and I constantly blame myself and feel very guilty about it.

J. How did your family members (or caretakers) react when evidence of your **sexual abuse** became known? (Indicate one).

- ○ They never did find out what had happened to me.
- ○ They would not accept that it happened, and said I had made it up.
- ○ They accepted that it happened, but didn't see anything wrong about it.
- ○ They accepted that it happened, but were cold and distant towards me after it became known.
- ○ They accepted that it happened, but were rejecting and hateful towards me after it became known.
- ○ They accepted that it happened, but blamed me for what happened, and made excuses for the person(s) really at fault.
- ○ Their main concern was wanting to punish the person(s) who had done that to me.
- ○ Their main concern was about me, and they were loving and supportive of my needs.

Appendix E
Personal Information Questionnaire

Are you male or female? M F
What is your age? _____

Do you: live in a assisted living residence? Yes No
If so, for how long? _____
rent an apartment or house? Yes No
live with family? Yes No
own your own house Yes No

How far did you go in school? (Please circle) Grade school Some high school Completed high school Some college College Degree Graduate Degree

What kind of work do you do/did you do prior to retirement? _____

Have you ever been to a Casino in Windsor? Yes No

Have you ever been to a Casino outside of Windsor? Yes No

How frequently do you/did you go? weekly monthly few times per year less than annually

Have you ever bought lottery tickets? Yes No

If yes, how frequently (circle one): weekly monthly few times per year less than annually

Have you ever been to a Bingo establishment? Yes No

If yes, how frequent do you/did you go? weekly monthly few times per year less than annually

When you were gambling, what type of games did you typically play? Please list all.

Please estimate your annual income (present and prior to retirement if applicable).

Present $0-$15000 $15001-$30000 $30001- $45000 $45001- $60000 $60000+

Pre-retirement $0-$15000 $15001-$30000 $30001- $45000 $45001- $60000 $60000+

Appendix F

Interview/Questionnaire

Exploratory Questions - Reasons for Gambling

1. When did you start to gamble regularly? If applicable, how long after was it that you realized you may have a problem with gambling? What lead you to this realization?
2. What, in your opinion, initiated your first gambling experience?
3. Was there something about gambling that you found compelling, or attractive, or pleasurable? If so, in your own words, what was it?
4. Why do you gamble now? If you don't, why not?
5. What, if anything, does/did gambling "do for you"?
6. Prior to your first time gambling, did you suffer a significant loss in your life (incl. loss of a family member, best friend, relative, or close associate)? Do you feel that this may have contributed to your eventual need to gamble more?
7. Prior to your first time gambling, did you experience a decline in social circumstance i.e. not able to participate in social events that you used to be able to, change in living and/or financial situation, etc.)? Do you feel that this may have contributed to your eventual need to gamble more?
8. Have you noticed a change in how socially active you are now? If so, what do you think triggered this change?
9. Prior to your first time gambling, were you experiencing any health or physical problems? Do you feel that this may have contributed to your eventual need to gamble more?
10. Do you think the fact that you live in an area where gambling is widely accessible, and accepted, influenced your gambling behavior and subsequent problems?
11. Has anyone in your family ever experienced difficulties with gambling, drinking, or substance abuse?
12. Have you ever felt that you had a problem with alcohol or drug-use (including pain medication)?
13. Do you ever feel lonely and/or bored? If so, what do you do to cope with these feelings?
14. Do you feel that complete abstinence is necessary to successfully recover from a gambling problem? Can a problem/pathological gambler control their gambling in your opinion? If so, why? If not, why not?

Appendix G

The Geriatric Depression Scale (GDS; Brink, Yesavage, Lum, Heersema, et al., 1982)

Please answer (circle) the following question as they apply to you over the past 12 months.

1. Are you basically satisfied with your life?	Yes	No
2. Have you dropped many of your activities and interests?	Yes	No
3. Do you feel that your life is empty?	Yes	No
4. Do you often get bored?	Yes	No
5. Are you hopeful about the future?	Yes	No
6. Are you bothered by thoughts you can't get out of your head?	Yes	No
7. Are you in good spirits most of the time?	Yes	No
8. Are you afraid that something bad is going to happen to you?	Yes	No
9. Do you feel happy most of the time?	Yes	No
10. Do you often feel helpless?	Yes	No
11. Do you often get restless and fidgety?	Yes	No
12. Do you prefer to stay at home, rather than going out and doing things?	Yes	No
13. Do you frequently worry about the future?	Yes	No
14. Do you feel you have more problems with memory than most?	Yes	No
15. Do you think it is wonderful to be alive now?	Yes	No
16. Do you often feel downhearted and blue?	Yes	No
17. Do you feel pretty worthless the way you are now?	Yes	No
18. Do you worry a lot about the past?	Yes	No
19. Do you find life very exciting?	Yes	No
20. Is it hard for you to get started on new projects?	Yes	No
21. Do you feel full of energy?	Yes	No
22. Do you feel that your situation is hopeless?	Yes	No
23. Do you think that most people are better off than you are?	Yes	No
24. Do you frequently get upset over little things?	Yes	No
25. Do you frequently feel like crying?	Yes	No
26. Do you have trouble concentrating?	Yes	No
27. Do you enjoy getting up in the morning?	Yes	No
28. Do you prefer to avoid social gatherings?	Yes	No
29. Is it easy for you to make decisions?	Yes	No
30. Is your mind as clear as it used to be?	Yes	No

One point for each of answer. Ranges: normal 0-9; mild depress., 10-19; severe depress., 20-30.

1. No	11. Yes	21. No
2. Yes	12. Yes	22. Yes
3. Yes	13. Yes	23. Yes
4. Yes	14. Yes	24. Yes
5. No	15. No	25. Yes
6. Yes	16. Yes	26. Yes
7. No	17. Yes	27. No
8. Yes	18. Yes	28. Yes
9. No	19. No	29. No
10. Yes	20. Yes	30. No

Appendix H
The Windsor Gambling Screen for Older Adults (WGSOA)

Many people gambler and have different experiences of gambling. We would like to know about your gambling experience. I'm going to read you a series of statements and I'd like you to think about them and tell me if they apply to you by answering either Yes or No.
[For the first item, read the question and ask "Do you think this applies to you, yes or no?" Circle YES or NO response].

S1.	Have you ever been surprised by the amount of time that has passed when you've finished gambling?	YES	NO
S2.	Does gambling give you a sense of excitement or a "high" which makes you feel more alive?	YES	NO
S3.	Have you ever spent more money that planned when gambling?	YES	NO
S4.	When you're feeling bad, does gambling make you feel better?	YES	NO
S5.	Does gambling make you feel important?	YES	NO
S6.	When you are gambling, do you stop thinking about day-to-day problems?	YES	NO
S7.	Each time you go gambling do you believe that you could win big?	YES	NO
S8.	Since you started gambling do you find yourself losing interest in social or other activities?	YES	NO
S9.	Has gambling filled a void in your life and helped you feel less lonely?	YES	NO
S10.	When you lose money gambling do you return to try and win it back?	YES	NO
S11.	Since you started gambling, have you had trouble paying household and personal expenses, such as rent, food or bills?	YES	NO
S12.	Have you ever hidden your gambling activities, for example, where you were, how much you lost?	YES	NO
S13.	Have you borrowed money from friends, family, credit cards, or financial institutions so you can gamble?	YES	NO
S14.	Have your close relationships suffered since you started gambling?	YES	NO
S15.	Do you find yourself thinking more and more about gambling and looking for ways to do it?	YES	NO

S16.	Do you feel physical pain when gambling?	YES	NO
S17.	Since you started gambling, have you felt more depressed, either after gambling or in general?	YES	NO
S18.	Since you started gambling, have you been taking care of yourself, for example, going to the doctor or hairdresser, eating and sleeping well, exercising, checking your blood pressure?	YES	NO
S19.	Have you experienced extreme mood swings since you started gambling?	YES	NO

Additional Interview Questions (Part of the WPGS study):

When did you last gamble?
How much did you spend the last time you gambled?
How often do you gamble?
How old were you when you started gambling?
If different (and applicable) how old were you when you realized you might have a problem gambling?
Can you tell me about any precipitating events that may have been occurring when you started to gamble?
Is there any history of gambling problems in your family?

Problem Gambling Correlates (Part of the WPGS study):

Have you ever used alcohol or drugs while gambling?
Have you ever gambled while being drunk?
Have you ever had an alcohol or drug problem?
Have you ever been under a doctor's care due to physical or emotional problems brought on by stress?
Have you ever felt seriously depressed?
Have you ever thought about, or attempted, suicide as a result of your gambling?
Has anyone in your family ever had an alcohol or drug problem?

Appendix I

Coping Inventory for Stressful Situations (CISS) (Endler & Parker, 1990)

Instructions: The following are ways people react to various difficult, stressful, or upsetting situations. Please circle a number from 1 to 5 for each item, where 1 is not at all and 5 is very much. Indicate how much you would typically engage in these types of activities, over the past 12 months, when you encounter a difficult, stressful, or upsetting situation.

	Not at all				Very much
1. Schedule my time better.	①	②	③	④	⑤
2. Focus on the problem and see how I can solve it.	①	②	③	④	⑤
3. Think about the good times I've had.	①	②	③	④	⑤
4. Try to be with other people.	①	②	③	④	⑤
5. Blame myself for putting things off.	①	②	③	④	⑤
6. Do what I think is best.	①	②	③	④	⑤
7. Become preoccupied with aches and pains.	①	②	③	④	⑤
8. Blame myself for having gotten into this situation.	①	②	③	④	⑤
9. Window shop.	①	②	③	④	⑤
10. Outline my priorities.	①	②	③	④	⑤
11. Try to go to sleep.	①	②	③	④	⑤
12. Treat myself to a favourite food or snack.	①	②	③	④	⑤
13. Feel anxious about not being able to cope.	①	②	③	④	⑤
14. Become very tense.	①	②	③	④	⑤
15. Think about how I have solved similar problems.	①	②	③	④	⑤
16. Tell myself that it is really not happening to me.	①	②	③	④	⑤
17. Blame myself for being too emotional about the situation.	①	②	③	④	⑤
18. Go out for a snack of meal.	①	②	③	④	⑤
19. Become very upset.	①	②	③	④	⑤
20. Buy myself something.	①	②	③	④	⑤
21. Determine a course of action and follow it.	①	②	③	④	⑤
22. Blame myself for not know what to do.	①	②	③	④	⑤
23. Go to a party.	①	②	③	④	⑤
24. Work to understand the situation.	①	②	③	④	⑤
25. "Freeze" and don't know what to do.	①	②	③	④	⑤
26. Take corrective action immediately.	①	②	③	④	⑤
27. Think about the event and learn from my mistakes.	①	②	③	④	⑤
28. Wish that I could change what had happened/how I felt.	①	②	③	④	⑤
29. Visit a friend.	①	②	③	④	⑤
30. Worry about what I am going to do.	①	②	③	④	⑤
31. Spend time with a special person.	①	②	③	④	⑤
32. Go for a walk.	①	②	③	④	⑤
33. Tell myself that it will never happen again.	①	②	③	④	⑤
34. Focus on my general inadequacies.	①	②	③	④	⑤
35. Talk to someone whose advice I value.	①	②	③	④	⑤

	Not at all				Very much
36. Analyse my problem before reacting.	①	②	③	④	⑤
37. Phone a friend.	①	②	③	④	⑤
38. Get angry.	①	②	③	④	⑤
39. Adjust my priorities.	①	②	③	④	⑤
40. See a movie.	①	②	③	④	⑤
41. Get control of the situation.	①	②	③	④	⑤
42. Make an extra effort to get things done.	①	②	③	④	⑤
43. Come up with several different solutions to the problem.	①	②	③	④	⑤
44. Take some time off and get away from the situation.	①	②	③	④	⑤
45. Take it out on other people.	①	②	③	④	⑤
46. Use the situation to prove that I can do it.	①	②	③	④	⑤
47. Try to be organized so I can be on top of the situation.	①	②	③	④	⑤
48. Watch tv.	①	②	③	④	⑤

Dissociation/Escape (Jacobs, 2000)

During the past 12 months, while gambling (Dissgam):

1. Have you ever lost track of time?	YES	NO
2. Have you ever felt like you were a different person?	YES	NO
3. Have you ever felt like you were outside yourself, watching yourself?	YES	NO
4. Have you ever felt like you were in a trance?	YES	NO
5. Have you ever experienced a memory blackout for things that happened?	YES	NO

During the past 12 months, in general (Dissgen):

1. Have you ever lost track of time?	YES	NO
2. Have you ever felt like you were a different person?	YES	NO
3. Have you ever felt like you were outside yourself, watching yourself?	YES	NO
4. Have you ever felt like you were in a trance?	YES	NO
5. Have you ever experienced a memory blackout for things that happened?	YES	NO

Impulse Control Features (Impgamb) (American Psychiatric Association, 1994)

Over the past 12 months:

1. Have you ever felt that you could not resist the impulse, urge, drive, or temptation to gamble?	YES	NO
2. Did you typically feel an increasing sense of tension or arousal before gambling and then experience pleasure, gratification, or relief once you started gambling?	YES	NO
3. Did you ever feel that you had completely lost control over your gambling behaviour?	YES	NO

Appendix J
Perceived Stress Scale (Cole, Kamarck, & Mermelstein, 1983)

Instructions: The following questions ask you about feelings and thoughts you have had over the **last 12 months.** In each case, rate how often you felt or thought that way. Please circle your answers.

	Never	Almost Never	Sometimes	Fairly Often	Very Often
1. How often have you been upset because of something that happened unexpectedly?	1	2	3	4	5
2. How often have you felt that you were unable to control the important things in your life?	1	2	3	4	5
3. How often have you felt nervous and "stressed"?	1	2	3	4	5
4. How often have you felt confident about your ability to handle your personal problems?	1	2	3	4	5
5. How often have you felt that things were going your way?	1	2	3	4	5
6. How often have you found that you could not cope with all the things that you had to do?	1	2	3	4	5
7. How often have you been able to control irritations in your life?	1	2	3	4	5
8. How often have you felt that you were on top of things?	1	2	3	4	5
9. How often have you been angered because of things that were outside of your control?	1	2	3	4	5
10. How often have you felt difficulties were piling up so high that you could not overcome them?	1	2	3	4	5

Scoring: For items 1,2, 3,6,9, and 10: 1=0, 2=1, 3=2, 4=3, 5=4.
For items 4, 5, 7 and 8: 5=0, 4=1, 3=2, 2=3, 1=4.

Appendix K
Canadian Problem Gambling Index (CPGI) (Ferris & Wynne, 2001)

For the following questions, please circle the number corresponding to the answer. All questions refer to activities, behaviours, and feelings or thoughts for the **past 12 months**.
For all questions, **Sometimes = less than half the time, Most of the time = more than half the time.**

Q1. How often have you bet more than you could really afford to lose?
1. Never
2. Sometimes
3. Most of the time
4. Almost always

Q2. How often have you needed to gamble with larger amounts of money to get the same feeling of excitement?
1. Never
2. Sometimes
3. Most of the time
4. Almost always

Q3. How often have you gone back another day to try to win back the money you lost?
1. Never
2. Sometimes
3. Most of the time
4. Almost always

Q4. How often have you borrowed money or sold anything to get money to gamble?
1. Never
2. Sometimes
3. Most of the time
4. Almost always

Q5. How often have you felt that you might have a problem with gambling?
1. Never
2. Sometimes
3. Most of the time
4. Almost always

Q6. How often have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?
1. Never
2. Sometimes
3. Most of the time
4. Almost always

Q7. How often have you felt guilty about the way you gamble, or what happens when you gamble?
1. Never
2. Sometimes
3. Most of the time
4. Almost always

Q8. How often has your gambling caused you any health problems, including stress or anxiety?
1. Never
2. Sometimes
3. Most of the time
4. Almost always

Q9. How often has your gambling caused any financial problems for you or your household?
1. Never
2. Sometimes
3. Most of the time
4. Almost always

Appendix L
Medical Outcomes Study 20-Item Short-Form Health Survey
(Stewart, Hayes, & Ware, 1988)

Please read each question carefully and circle the number corresponding to only ONE answer.

1. In general, would you say your health is:

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

2. For how long (if at all) has you health limited you in each of the following activities? (Mark ONE circle on EACH line)

	Limited for more than 3 months	Limited for 3 months or less	Not limited at all
A. The kinds or amounts of vigorous activities you can do, like lifting heavy objects, running or participating in strenuous sports.	o	o	o
B. The kinds or amounts of moderate activities you can do, like moving a table, carrying groceries, bowling.	o	o	o
C. Walking uphill or climbing a few flights of stairs	o	o	o
D. Bending, lifting, or stomping	o	o	o
E. Walking one block	o	o	o
F. Eating, dressing, bathing, or using the toilet	o	o	o

---

3. How much bodily pain have you had during the past 4 weeks?

1. None
2. Very mild
3. Mild
4. Moderate
5. Severe
6. Very severe

4. Does your health keep you from working at a job, doing work around the house, or participating in any other daily events that you would normally do?
   1. YES, for more than 3 months
   2. YES, for 3 months or less
   3. NO

5. Have you been unable to do certain kinds or amounts of work, housework, or daily events because of your health?
   1. YES, for more than 3 months
   2. YES, for 3 months or less
   3. NO

6. For each of the following questions, please mark the circle for the ONE answer that comes closest to the way you have been feeling during the past month.
   (Mark ONE circle on EACH line)

	All of the Time	Most of the Time	A Good Bit of Time	Some of the Time	A Little of the Time	None of the Time
A. How much of the time, during the past month, has your health limited your social activities (like visiting with friends or close relatives)?	o	o	o	o	o	o
B. How much of the time, during the past month, have you been a very nervous person?	o	o	o	o	o	o
C. How much of the time, during the past month, have you been a happy person?	o	o	o	o	o	o
D. How much of the time, during the past month, have you felt so down in the dumps that nothing could cheer you up?	o	o	o	o	o	o

---

7. Please mark the circle that best describes whether each of the following statements is true or false for you. (Mark ONE circle on EACH line)

	Definitely True	Mostly True	Not Sure	Mostly False	Definitely False
A. I am chronically ill	o	o	o	o	o
B. I am somewhat ill	o	o	o	o	o
C. I am as healthy as anybody I know	o	o	o	o	o
D. My health is excellent	o	o	o	o	o
E. I have been feeling bad lately	o	o	o	o	o

Appendix M
Scale of Gambling Choices (SGC) - 12 Item Version
(O'Connor, Dickerson, & Phillips, 1995)

The following survey asks you about your gambling during the past 12 months. We ask that you please take the time necessary to complete the survey carefully and honestly. Read each statement and give your response using the 5-point rating scale beside the statement. Circle the response that best describes how often that statement applied to you **during the past 12 months**. If a statement does not apply to you at all, please tick the box that is next to the scale on the right-hand side. There are no right or wrong answers.

During the past 12-months..	Very Rarely	Rarely	Sometimes	Often	Very Often	Does Not Apply
1. I have found it difficult to limit how much I gamble.	1	2	3	4	5	☐
2. When I have been near a club/hotel, horse racing venue or casino, I have found it difficult to resist gambling.	1	2	3	4	5	☐
3. When I have wanted to I have been able to gamble less often.	1	2	3	4	5	☐
4. I have been able to stop easily after a few games of bets.	1	2	3	4	5	☐
5. I have been able to stop gambling before I spent all my spare cash.	1	2	3	4	5	☐
6. I have been able to resist the urge to start gambling.	1	2	3	4	5	☐
7. Once I have started gambling I have an irresistible urge to continue.	1	2	3	4	5	☐
8. When I have wanted to I could stop gambling for a week or more.	1	2	3	4	5	☐
9. I have been able to stop gambling before the last race, horse racing venue, club or casino closed.	1	2	3	4	5	☐
10. Even for a single day I have found it difficult to resist gambling.	1	2	3	4	5	☐
11. I have been able to gamble less often when I wanted to.	1	2	3	4	5	☐
12. I have been able to stop gambling before I got into debt.	1	2	3	4	5	☐

Appendix N

The following are responses given by the 16 individuals who agreed to complete the interview found in Appendix F. To facilitate an exploration of common themes across individuals, the responses have been organized by question rather than by individual. Highlighted (**bold**) sections indicate commonalities found among the participants.

Question #1: When did you start to gamble regularly? If applicable, how long after was it that you realized that you have a problem with gambling? What lead you to this realization?

#1. Childhood with my family...I guess I really started gambling around '95 **when Casino Windsor opened**. It was **3 years** before I realized I had a problem. I realized it because I **maxed out my credit card** to the point that my minimum payment was $900. and I could not make it. I **used gambling to "dull" difficulties in my life** particularly surrounding my husband. I looked in the paper and called the Problem Gambling Services and they have been a big help for me.

#4. When I was school age, I would hustle kids with marbles...I never felt I had a problem with gambling - sometimes some of my gambling was "compulsive behaviour" in that I wouldn't really think about it, for example, drive by the track and just decide to stop. I would just do it. I do enjoy gambling, especially cards, but I have learned from my past mistakes.

#20. My first time was when the **casino opened** (1993) - that was the first time ever been to casino. It was **4 to 5 years** later before I realized I had a problem. It was not the money I was losing that made me realize, it was the **feeling that I needed to go - that I was addicted**.

#27. I was 60, **my wife had just died**. A couple years later, and still sometimes, I think might have a problem because do it **(gambling) more than I should**. **People started commenting** on how little they see me and I realize that I do spend a lot of time gambling.

#37. After my **partner of 12 years left me.** It was very hard for me and out of the blue. I am not sure I have a "problem" but I do probably gamble more than I should. Q. Why do you say that? A. **Just a feeling** I have...sometimes I worry about it.

#40. Started after my **husband retired**; our **son had just left home** for school and my husband was always at home so I was looking for something to do. He was quite miserable to be with at home and I was lonely and needed to find something to get me out of the house. I don't really think that I have a problem with gambling - it's not like I am making us broke.

#54. Started at age 57 - was the **2nd year of the casino in Windsor**. I realized I may have a problem a few months, or maybe a year later because I was building up **huge debts** and **missing work.** My **family also told me they thought I might have a problem**.

#55. I started about **10 years ago**. I went because a **best friend from work took me.** I realized it might be a problem about 2 years ago. My **family was concerned** and both my friend and I (#54 is her friend) have talked about it. We, I, was spending way to much money and time there.

#56. I started really gambling with the **Casino Windsor opening**, about 8-9 years ago? I was **losing more than I intended and staying longer than planned.**

#57. In my 20's - it was a post-war celebration. I don't think I have ever had a problem.

#59. When I was 10 years old I gambled for the first time. Played bingo and won $10.00 which was huge back then. I started gambling somewhat in high school and while working at Ford. I have gambled almost my whole life. I quit for a couple of years and then **after my wife died** (she was alcoholic), I was going every day to the track. Sometimes up to $1000/day but I **never felt it was really a problem**. I always gamble alone - I don't want to be distracted.

#62. I started about 10-11 years ago when my **husband died**; around the time the **casino opened**. About 3 years ago I guess I started to realize it was a problem but was about 6 months ago that I really thought I needed help. **My debts were becoming too big for me** to handle; my **daughter had to help me with money** and pressured me to get help for gambling problem.

#64. When I was 23 I went, just for a lark. I started gambling regularly about **3 years ago** (57 years old). One year ago realized I might have a problem - I started **piling up debts** that I could not pay. I went to the problem gambling centre and they confirmed my fears.

#65. Around 1994 - **just after the casino opening**. I **split from my husband 3 month prior**. It was about **4 years before I realized I had a problem**, maybe longer. Then when I would get angry with my husband (following reconciliation) I would go to the casino to "escape". I realized it was a problem when I started **taking money out of my RRSP and never had money to spend on things I needed or wanted.**

#79. In my 30's - I didn't start gambling "regularly" until about 10 years ago when the **casino opened in Windsor.** About 5 years ago I thought I might have a problem; I guess it's been longer than that but really I only acknowledged it then. I kept going though until last few months when my **daughter had to come to my**

rescue for my monthly rent. I **did not even realize that I was broke** - my husband took care of that (husband is deceased) and I just assumed we had a lot of money and that it didn't matter.

#89. I guess I was about 30 when I started buying lottery tickets. I started gambling regularly about 5 years ago, mainly bingo and a few times a year trips to the casino. I **don't REALLY think I have a problem**...I don't gamble as much as some people I know.

Question #2: What in your opinion initiated your first gambling experience?

#1. It was **fun**, then it became a **distraction**, then for spite against husband. I **won over $1000** the first time and then 2 years later I had a very big win...after that it really got out of hand. The casino is pretty smart you know, they really know how to get you hooked.

#4. Making money; I **figured that I could win** at it and I was right.

#20. I was experiencing a lot of stress and **gambling really became a stress reliever**, a way to **escape from thinking about family stuff**...my husband was an alcoholic and it gave me a way to "escape" from him...**the first time I went I "got what I was looking for"**.

#27. I was looking for **something to do after my wife died**; I suppose gambling kind of served as a **distraction** from having to think about that...I didn't have to think about her not being here when I was gambling.

#37. My **partner left me** and I needed to be around people...I was also **hoping to meet someone** new and thought that gambling might give me that opportunity.

#40. I went with a **friend to bingo** - I had been to a casino before but never to bingo and I really enjoyed it.

#54. There is no doubt about it - I was **lonely and very depressed**. I had been depressed for a while but was getting worse. I **worried about having to retire and lose all of my friends** or at least not being able to see them anymore. **Gambling gave me an "out"** or at least an excuse...no, a way, a **distraction** so I did not have to think about it.

#55. I went **with a friend** - both of us were **bored** and looking for something **exciting** in our lives...gambling was it, or should I say became it.

#56. Mainly **curiosity**, and it was a **social activity** so a way to be with people.

#57. I went for the first time with **friends** a long time ago. I didn't gamble much

after that until a few years ago and then I started again when the casino opened in Windsor. Q Why start again? A The new casino, **curiosity**, being **bored**, looking for something to do probably all contributed to me starting gambling again.

#59. After my **wife died** (she was an alcoholic), I started going to the track. It **gave me something to do** and an **escape from being alone** in the house. I sometimes spent up to $1000./day but never felt it was really a problem. I always gamble alone because I do not want to be distracted.

#62. When my **husband died,** I moved into a home. It (I) was **very lonely** despite all the people. The home had an outing to casino and bingo, they did it once a month or so I think. I went and loved it; it **made me feel like I was still alive**.

#64. Probably **going on disability** had something to do with it. I **felt worthless** and worried about money a little. I went to casino and won $1000.00 on roulette and I guess you could say I have been hooked ever since.

#65. It was **post-break-up from my partner**. I was a also a little **curious**.

#79. My initial visit was just for **fun**, and to see what it was like, you know being **curious** when I was 30...just to see what it was all about, you know, curious. About 10 years ago, me and the bridge ladies went to try our luck and I kind of got hooked. My **husband died** 4 years later and then I really started to go more often....I **felt very alone** and gambling really seemed to **take me away** from his loss, or made it easier to deal with anyway.

#89. Just for fun - I started with the bingo mainly because I **didn't have anything else to do** and it was **fun** and I made some **new friends**.

Question #3: Was there something about gambling that you found compelling, or attractive, or pleasurable? If so, in your own words, what was it?

#1. "I **controlled** what I was doing!" I did not have any control over my marriage and I really enjoyed the feeling of control...and I guess **getting back at my husband** by spending money.

#4. I am good at it so of course I enjoy it...you would too if you won all the time.

#20. It's fun, it really is. It was a place I could go by myself which I liked. It was also a big sense of **escape** from people I knew, all of my husband's friends and even an escape from my husband too.

#27. It **kept me from having to think about my wife** (deceased) which might

sound strange but it's true...I **didn't feel as sad or lonely**...gambling was **distracting** and of course also **exciting.**

#37. It was an **escape, a distraction** - it made it **easier to not think** about her (partner who left). I guess in a way I was also **punishing** myself by losing money but I just didn't care. Q. Punishing yourself for what? A. For not being able to keep the relationship I guess.

#40. I always liked the casino - all the people and excitement it was **very exciting**. You know it is like a different world. I just enjoy sitting at a table or with bingo cards.....it's a little like a **high** and **an escape from "ordinary" life**.

#54. I loved it -initially very **exciting**.....also **lots of people**, bright lights, the whole package. Later on it then became a **distraction**; it was kind of like I could **leave my crappy world behind** and **not have to worry or think** about things, or even remember that I was sad.

#55. It is **fun** and **exciting**. You have a **chance to win**, you **feel kind of important and accepted**; like you matter. It is also very **social**; there are not many places you can go to where you can be around people laughing and smiling and enjoying themselves and feel like you are a part of it.

#56. Excitement I guess - and of course the chance that you might win.

#57. It's **fun**, it **kills time**.....no, really because it is fun and you can **win good money.**

#59. Definitely the **feeling of power** that is so attractive - my main game is roulette. I only go to the track for the big races now. I get a feeling like it is "me against the mob" - and that is **exciting.**

#62. Liked to **meet people**, I **felt alive and "included"**. It also helped **take my mind off of how unhappy** I was and how much my **life had changed for the worse** (re. husband gone and not having my own home anymore).

#64. It was **exciting** as heck at first, then became so easy to just be myself in it and **not have to think of anything** but the game....that is of course until you leave after losing a ton of money, and then you feel even worse until the next time you go back to try and win it back that is.

#65. Because of being **alone**, it gave me something I could do and usually come with money. When I first started, it was the **excitement** but there really is no excitement anymore.

#79. I felt **very alone** and gambling really seemed to **take me away from loss of**

my husband.

#89. It's **exciting** and made me **feel sort of alive** which when you are my age is not as weird as it sounds (grins).

Question #4: Why do you gamble now? If you don't, why not?

#1. It is easy to do, it's an **escape**. I always went alone but eventually you start to build up a sense of sadness which I think is one of the reasons I stopped.

#4. **Action** at crap tables...**excitement** of the action, the enthusiasm building up as one plays with others around the table. I basically go and win at blackjack so that I can (afford to) go to the craps table.

#20. Still for **excitement** - once every three weeks. My husband had no clue about my gambling. I was already in it treatment when he found out. Part of the excitement was the thrill of getting away with it, of not getting caught...now it is just fun but I make sure that I don't get pulled back in.

#27. Not sure why I gamble now - it **kills the time**, something to do especially when I'm **lonely or bored**.

#37. I am used to it, I like the feeling, or **"lack of feeling"**. It sort of makes everything **numb**.

#40. I think of it as my **outlet, my escape**...it still feels a little like being **high**.

#54. Same reason I started. It let's me **forget how useless my life is**. Also because I have made a lot of **"friends"** and the people who work at the casino.

#55. **"I fit in"** and it makes the **days seem shorter and more bearable**.

#56. **Excitement** - the **chance that I might win**.

#57. It's the same - it is **fun** and I still make money overall I think.

#59. I am very superstitious, one number each time, win and walk away. It is still about the **power and excitement**..it is like getting ready for battle. I don't get the perks or anything. I must admit that sometimes I get very aggressive when I am there. Q. Why do you think that is? A. I am not sure...I feel competitive, like I said, about to battle which gets you riled up a bit I guess.

#62. I feel like I can't help it - **what else would I do**?

#64. I am trying not to, it just seems to pull me in, like it **has a hold on me.**

#65. "Escape!!!" Q. From what? A. Everything, **from reality**. I **feel like someone different** when I am there - I don't have any problems. It is very **stimulating** - I don't get enough stimulation from my marriage.

#79. It makes me **feel "alive"** and it is better than sitting around with all the other ancients waiting to die.

#89. It still makes me **feel alive and important** and it also keeps me from being bored - it is a **distraction** too, especially when I'm not feeling well.

Question #5: What, if anything, does/did gambling "do for you"?

#1. Gambling is an **escape** for me.

#4. I need to manage money when gambling. I have a lot of **fun**. I know it costs me money but I manage it; you have to have a strategy going in or you could lose a lot.

#20. It is still **exciting and social** but...I don't really need to feel like I am getting away with it anymore. It's not about the **power** anymore. My husband is sober now and to be quite honest I now actually feel kind of guilty about what I used to do. I was not working, my husband had to work 7 days a week just to support my gambling and he didn't even know I was gambling!!! Took treatment for one year with Charlie...I also tried the 12 step program (GA) but they weren't really for me. Now my typical trip to the casino costs me about $120.00. Back then it was mor like $350.00 I always lost, hardly ever left with any money at all. I leave the bank card in the car now, but it is still hard to leave. I think the main thing now is that I do not want to put my husband through that...I don't feel like he owes me anymore. If anything, I would say it is the other way around.

#27. Let's me **escape** I guess.

#37. It is an **escape** and a **distraction** like I said before. I don't feel like I am punishing myself anymore though. I know a lot of people at bingo so **I feel accepted**.

#40. The **excitement**, the **escape** from daily and dull routine. Feeling like you are **living someone else's life**.

#54. It gives me a place to go and **"leave my troubles behind"** (laughs). I feel kind of accepted there.

#55. It **takes me away**, it is my refuge.

#56. I forget my problems, the bad things in life. I become oblivious to everything, which I like.

#57. It's a hobby; you know, it **gets me out** of the house.

#59. **Power**, power, power!. I **control** it, I love the fight, it's exciting and I am sure that I can win...or that I will eventually at least.

#62. It kind of gives me a reason to get up and something to look forward to. I **feel like a different person** when I am there.

#64. It's an **escape** of sorts. I feel like I am in a totally **different world** when I am in there, one where I am in **control** even though I know that is ridiculous (laughs out loud). Q. Why are you laughing at that? Why do you think that is ridiculous? A. It sounds silly because I know I have no control over the game itself but at the same time I really do feel like I am in control of what is going on...or at least in control of what I am doing. There aren't many time anymore when I feel like that.

#65. Nothing. It used to be entertainment just being there, watching others play - now nothing - don't know why I still go. It is still probably an **escape**. I guess that now I go there to prove something to myself, to prove that I won't spend more than I planned when I go. Guess I want to show that I can **control** it if anything, but it really doesn't give me any pleasure.

#79. I guess it keeps me **feeling young and accepted**- this place (retirement home) can kill you in a hurry.

#89. Keeps me from being bored. It's a **distraction** too, especially when I don't feel well.

Question #6: Prior to your first time gambling, did you suffer a significant loss in your life? Do you feel that this may have contributed to your eventual need to gamble more?

#1. My **marriage became really bad**. My husband had an affair and we broke up. Later on we reconciled but I was a different person by then. I think the break-up was one of the biggest reasons that I really fell into the "gambling trap". It was a distraction and the feeling of control was something that I honestly believe I needed to feel better about myself. I still get the urge to go sometimes and swear to you that THAT is what I am missing.

#4. No.

#20. No...well I guess kind of. My **husband being an alcoholic and getting worse** over the years made me feel alone and one day I realized that I really was alone, and unhappy, and stressed. That is what led me to gambling so in a way I guess it was a loss. Not that he is sober I feel like I have him back.

#27. Yes, definitely. I am pretty sure that I **never would have gone/started gambling if my wife was still alive**...and I KNOW that I would not have gambled as much, at least not to the point that it became a problem.

#37. When I **lost my partner**...(crying)....I was in so much pain..emotionally. Gambling made the **pain go away**...no, it didn't but it did make me **numb** while I was doing it. I needed that at the time. I never would have become "addicted" if you want to call it that if she had not...

#40. Ya, **lost my kids** (empty nest) and gained my husband (retired) at home (laughing). It definitely contributed to my gambling because my life had changed so much and not the for the better, at least not at the time. I needed some **stimulation**, some **excitement**, and all my husband wanted to do was sit around the house. I had the kids before which was such a big part of my life and then nothing...gambling kind of **filled that void**.

#54. No, not really. My **partner had died 2 years earlier** from cancer but I don't think that led me to gambling.

#55. No, not really although **retirement** was coming up - guess that had a little effect.

#56. Retirement so I guess you could say that I lost my job. I really do think there was a relationship between the two to be honest. Gambling **occupied my time** and believe me after working your whole life and then doing nothing you really need something to do, something to fill the days.

#57. I **lost my wife 2 years before** started gambling. I don't think its related although I must admit I **became much less social** when she died and gambling gave me a social thing to do...people to be around and **not feel so lonely**.

#59. I **gambled much more after wife died**. I felt **very alone**, and very guilty because I left my wife and then she passed away. **Gambling helped take the guilt away** I think, and also the **emptiness** if you can understand that - are you married? If so, THEN you might understand.

#62. Absolutely. I **lost my husband, lost my house, lost most of my independence** when I came to this place. I basically lost my life and gambling at least gave me a little sense of being.

#64. No.

#65. My **separation** did contribute to gambling, no question about it.

#79. No, not my first time, but when I **lost my hubby** it definitely increased my desire and even need to go to the casino.

#89. No, not really - I moved in with my daughter though which was a pretty big change for me. I **lost some of my independence** which when I look back was a bigger loss that I think I wanted to admit.

Question #7: Prior to your first time gambling, did you experience a decline in social circumstance? Do you feel that this may have contributed to your need to gamble more?

#1. Not really except for the fact that I **no longer had my husband for support**...I guess my social situation did change as a result of that, but I am not sure that that was related to my gambling...or maybe it was?

#4. No.

#20. Socially I **didn't have a lot of friends** which might have contributed to my gambling. Gambling is the only thing that is enjoyable to me.

#27. Of course. I used to do everything with my wife, like going for meals, vacations, her friends and other couples. I don't really feel like doing that as much now. It is just not the same without her but gambling is something that I can do on my own and **sort of feel like I am still with people**.

#37. I definitely changed my social life. I **lost a lot of friends** or at least felt like I had.

#40. Not a decline as much as a change with my **children leaving** and my husband being home all the time.

#54. Not at the time but I knew I was going to when I **retired**. **Hard to keep in touch with people**, friends, from work when you are no longer working. I think that had an effect.

#55. The whole gambling thing was a social activity and why I started in the first place. It was actually a chance for the better in that respect.

#56. I had both financial and **social changes** as a result of my **retirement**

#57. Yes I **lost a lot of friends** and contacts when my wife died. We used to do most things together and I really felt kind of lost when she died and still do sometimes.

#59. I definitely have fewer social contacts now than I used to but I don't really know if that had anything to do with my gambling. On second thought, it did because **if I still had all the friends I used to (when my wife was alive) I am pretty sure that I would not have gotten so involved with gambling**.

#62. My **husband WAS my social life**, except a few friends who I didn't see as much when I moved into home.

#64. Yes - when had to leave work, I was alone and bored. I felt useless and really **lost touch with a lot of my friends**.....I guess I didn't think they would see me the same way.

#65. Over a one-and-a-half week time span, my **husband left and I lost my job under** "less that ideal" circumstances. I was getting very little respect at work, especially from my boss. I was working 18 hour days, their was a strike, and eventually I left even though I enjoyed the job the most. That had a **huge impact on my social life and ultimately led to my gambling**.

#79. Yes and No - my friends all wanted to do it and I felt like I would have been an outsider if I didn't. In a way, I am glad I did but I am obviously not thrilled where I have wound up in terms of money. It's my own fault I suppose.

#89. I had health problems for the last 5 years or so, so I guess you could say that, yes. Moving in with my daughter also significantly changed how much I went out and who I saw. Because I am so old I have **lost a lot of my friends** so the few that I do have left are important...and most of them gamble as well.

Question #8: Have you noticed a change in how socially active you are now? If so, what do you think triggered this change?

#1. No significant social changes. I have more friends, especially good friends now in recovery. I am quite active socially now.

#4. No.

#20. Yes, I have **very little social activity now**. I don't have many friends left and **gambling keeps me pretty busy**.

#27. I am definitely **less social now**. Like I said before, ever since my wife died I **just do not do that much with other people, except gamble** of course. But that isn't really with other people...at least not people I know.

#37. **Bingo has made me more socially active** I think but I don't do much else.

#40. I would say **more socially active now but mostly with bingo**. I **don't do as much other stuff as I used to** though. Q. Other stuff? A. Go out for lunch with friends, the theatre, things like that...but it is also hard to get around now where as bingo is very easy to get to.

#54. I am more **active but only because of the casino**. I **never see any of my old friends** anymore and I tend to avoid my family because they make me feel guilty.

#55. I am **still very active but only at the casino**. It is easy to get there and you don't need to go with a group of people if you don't want to.

#56. No.

#57. About the same - **if not for casino, I would not get out much though**.

#59. I think I am just as **socially active** although I do different things than I used to (i.e. the **casino mostly**). That is one of the reasons that I like to gamble.

#62. **Bingo** is pretty much the **only social thing** I do.

#64. I have **no social life unless you count the casino** but I do that alone. I have **lost touch with almost all of my friends** because of my disability and frustration and now **because I spend most of my time at the casino**.

#65. No, I am **not really socially active**. I think that was one of the things that lead me to gambling actually, was to try and meet people, make friends.

#79. Not really. It is very hard to be active at all in this place. That is **one of the reasons I enjoy the casino so much** - there are lots of people just like me, old and lonely.

#89. I think I am pretty active for an old woman - **if it weren't for bingo, I wouldn't be though**...there is not much for someone my age to do out there.

Question #9: Prior to your first time gambling, were you experiencing any health or physical problems? Do you feel that this may have contributed to your need to gamble?

#1. Fibramyalgia and arthritis prior to my gambling but for a long time before...I don't think it had anything to do with my gambling though, pretty sure it did not.

#4. No. I'm a grinder, i.e. stay for the big run, for the enjoyment if it, not necessarily for the rush but sometimes for the excitement. I last as long as I can but I still work the rush. You can't have goals, what you want to win, but you must have limits, what you are prepared to lose. You can never get greedy, even after a big win. Q. Repeat question. A. Oh, no, I have no health problems now, and I didn't have any when I started gambling either.

#20. No.

#27. No.

#37. Not physical, just **mental problems** - and that probably contributed although I would rather not talk about it.

#40. No.

#54. I suffered from **depression** in a big way. I also had and still have bad arthritis. I think the depression definitely contributed.

#55. No.

#56. No.

#57. No.

#59. Prostate and pancreatic Cancer. My doctor sent me to a counsellor after I was diagnosed with cancer. It helped me deal with it. I felt very vulnerable and then they told me I was an alcoholic which was bull **** and that was the end of that! I really don't know if that had anything to do my gambling though...I doubt it, don't see why it would.

#62. Not really but I have had problems (physical) for past 3 years.

#64. Yes, my health deteriorated pretty fast and with it I developed some other problems too - **depression, stress, which made my pain even worse and might have made me gamble even more because gambling kind of took me away from that**. Q. From depression, stress, or pain? A. From all three. I really did not notice much while I was gambling.

#65. Fibracystis in 1986. It became worse and worse but I couldn't say if it contributed.

#79. I have always had some health problems but I really don't think they had anything to do with my gambling.

#89. I've had **health problems** for the last 5 years, so I guess you could say that, yes.

Question #10: Do you think the fact that you live in an area where gambling is widely accessible, and accepted, influenced your gambling behaviour and subsequent problems?

#1. My father was a gambler - he had a big problem with the horses. I often went with him to the track and always felt lucky. Gambling was very acceptable in my family. Without the casino, I would not have had a problem with gambling. So **yes**...I might have played Nevada tickets but never would have become a problem.

#4. **Yes**. Proximity leads to participation; there is no doubt about that, but an addict would make the trip anyway. However, having it close also makes it less exciting.

#20. **Yes**, definitely.

#27. **Yah**, I do - sure made it easier to get there and gamble. **I believe that my problems would not have started if it hadn't been right there and was advertised all the time**.

#37. **Yes**, definitely.

#40. Yes, definitely - could not do it if it wasn't so handy and easy to get to.

#54. Absolutely.

#55. Yes, definitely.

#56. Hell **yes** - no doubt or question about it. If the casino wasn't here I wouldn't have had a problem.

#57. **Yes, if there was no casino I would not gamble**.

#59. **Yes**, big time! If it wasn't here, wouldn't do it. I can control my gambling in my opinion...
making money is not the reason I go.

#62. Definitely - and being here (retirement home) makes it even more accessible. There is also a free bus to bingo.

#64. Yes I do **- if there was no casino, this never would have happened**. And you can quote me on that. I think that place should take responsibility for what they are doing to people. They make all this darn money while people like me are going broke. It isn't right and somebody, the government, should do something about it.

#65. Yes.

#79. Of course silly.....however, we probably would have found something else to do if the casino was not here

#89. Yes, and the fact that a few of the only friends I have left also like to play bingo.

Question #11: Has anyone in your family ever experienced difficulties with gambling, drinking, or substance abuse?

#1. Mom and dad were alcoholics - I do not drink. My mom was a very belligerent person when she drank and I think that had a big effect on me. It is definitely why I do not drink.

#4. No drugs. I do drink alcohol occasionally though. I have **two brothers who are alcoholics**, one more who drinks a lot and also **gambles** $4-5000/week on football. You see, I have been exposed to the "horrors" of gambling - that is why I am so careful now and am always in control.

#20. No.

#27. My dad was an **alcoholic and a gambler**.

#37. My **father gambled**, my mother and brother drank alcohol but I don't think anyone had a problem, at least not like people today. Q. What do you mean? A. You see all the stories on television about husbands beating their wives and so no...my family seemed to everything in moderation and it was never really a problem.

#40. Yes, my **dad gambled a lot** with his bookie. That used to make my mom so angry.

#54. No.

#55. No.

#56. Father used to do a lot of **horse betting**. It might have been a problem but I never knew if it was.

#57. Both of my **daughters gamble** and one has a serious problem. None of my other relatives do though, at least not that I am aware of.

#59. Dad was an **alcoholic.**

#62. My daughter gambles but it is not a problem. She goes occasionally, that's all.

#64. Yes, my **uncle was in GA** and my **mom was an alcoholic**.

#65. I would prefer not to talk about that.

#79. Yes, one of my **siblings** had a problem with **drugs** after the war but I would rather not say who if that is okay

#89. My **brother is an alcoholic**.

Question #12: Have you ever felt that you had a problem with alcohol or drug-use (including pain medication)?

#1. No.

#4. No.

#20. No.

#27. No.

#37. No, but I did drink heavily for a little while when my partner left. Q. Do you drink now or ever felt it was a problem? A. No.

#40. No.

#54. No.

#55. No.

#56. No.

#57. No.

#59. No.

#62. No, just gambling.

#64. No.

#65. No.

#79. Not at all.

#89. No.

Question #13: Do you ever feel lonely and/or bored? If so, what do you do to cope with these feelings?

#1. **Yes**, I use my friends for support when I get lonely or bored. I try to be honest with people about being a gambler. I go to meetings, garden, read, I have several hobbies. I also enjoy my grandchildren...basically I just try to stay busy.

#4. No.

#20. **Yes**. I cope with it, read a lot, talk on phone a lot.

#27. I do feel lonely a lot and try not to think about it, find ways to **distract like gambling** for example.

#37. **Yes**!!! I'm not sure how I cope with it. I try to stay busy, and keep myself **distracted**.

#40. **Yes**, I am still somewhat lonely but **bingo helps**.

#54. I am always **lonely and bored and sad** - that's **why I go to the casino**. That is also why I see a shrink...sorry, you know what I mean.

#55. **Yes**, definitely - I still do. My best friend goes with me to casino, if she didn't go, not sure I would...no, I guess I probably still would although we do seem to "feed" off of each other so to speak.

#56. Yes, **I often feel lonely. That is another reason for gambling**. For **women especially, it is a place you can go and feel safe. You don't have to be escorted there but it allows you to be still socially active and to get out of the house.** I have been a member of WPGS for 6 months now and one of the things I did as soon as I started was bar myself from the casino...and I really believe that one of the biggest things I miss is being able to be around all of those people without worrying about anything that you usually have to worry about when you are out in a crowd. I guess you wouldn't understand but when you are my age things look a lot different.

#57. Sometimes I miss my wife but I just try to remember the good times.

#59. Never lonely or bored so I do not have to worry about it (said with indignation).

#62. I am **lonely and sad all the time. Gambling helps me forget about it**.

#64. I am always **lonely and bored except when I'm at the casino**.

#65. I feel both **lonely and bored** but prefer to be by myself. Q. How do you cope with loneliness? A. I see my grand kids a lot, go out, I used to go to the **casino which helped**. I don't go so much anymore because I don't feel as lonely, and because I realized how much harm it was causing me.

#79. I am **lonely all the time** - it's like a morgue in here (just kidding)...but really it kind of is. We all come here to die and we all know it, at least those of us with our senses...that is one of the great things about the **casino; it really makes you feel alive**!!!

#89. I feel **lonely all the time**. I try to find ways to keep busy; I play **bingo**, travel, and visit my grand kids.

Question #14: Do you feel that complete abstinence is necessary to successfully recover from a gambling problem? Can a problem/pathological gambler control their gambling in your opinion? If so, why? If not, why not?

#1. ABSTINENCE is absolutely necessary! If I start again at all I will be absolutely hooked.

#4. "Like being a little bit pregnant"... "One is too many, l000 is not enough". That goes with any addiction. You have to quit cold turkey - it's all or nothing.

#20. Can you control it? I am really not sure. I don't think I can, that much I can tell you.

#27. I really do believe that control is possible.....but I may just be trying to convince myself so that I don't have to quite completely.

#37. I don't know. I would like to say control (smiles) but I'm not sure that is possible.

#40. I can control it, I could stop if I wanted to but it is not a problem for me. I can see how it would be a problem for other people though...but not for me.

#54. I think I will have to stop cold turkey. It just sucks me in but I really don't know how to quit. Do you have any suggestions? (I referred her to a local treatment centre).

#55. I think I could control it but I would need to find another outlet or activity to keep me busy.

#56. I can control it. I still gamble under control after I went 6 months completely abstaining. I can stop when I want to but I don't want to, or need to now.

#57. I don't really know, not something I have thought about before.

#59. I am honestly not sure.

#62. I guess I am going to have to stop altogether because I have tried and have not been able to cut back.

#64. I am trying to control it but I'm not sure I can. Once I start it is really hard to limit or to stop until I run out of money.

#65. I like to think can control it. I am trying to but I am still concerned that I could fall back into old patterns.

#79. I don't want to stop - why would I? I know I gamble too much but what else would I have to do? Q. Could you stop if you wanted to, or could you cut back, control it? A. I think that to really stop I would have to quit altogether. I don't think I could control it.....but I don't want to either.

#89. I really have no idea.

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